



ANNUAL REPORT  
ON THE  
HEALTH  
OF THE  
BOROUGH OF CHESTERFIELD  
FOR 1915,  
BY  
R. FRASER,  
M.B. Ch.B. Edin., D.P.H.  
MEDICAL OFFICER OF HEALTH.

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CHESTERFIELD:  
BALES & WILDE, GLUMAN GATE,  
1916.





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# BOROUGH OF CHESTERFIELD.

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## **HEALTH COMMITTEE, 1915-1916.**

### **Chairman :**

Councillor W. B. ROBINSON.

### **Vice-Chairman :**

Councillor EDMUNDS, J.P., C.C.

### **Members :**

THE MAYOR (Alderman E. Shentall, J.P.).  
Alderman BOOTH, M.D., J.P. Councillor LACK.  
„ HADFIELD, J.P., C.C. „ LANCASTER.  
Councillor CLARK, C.C. „ SHORT.  
„ EYRE, J.P. „ HODKIN.  
„ GLOSSOP. „ HIND.

### **Medical Officer of Health :**

R. FRASER, M.B., Ch. B. Edin., D.P.H.

### **Chief Inspector of Nuisances :**

C. E. WOOD, C.S.I.

### **Inspector of Nuisances :**

A. S. CARTER, C.S.I., Certif. Meat. Insp.

### **Assistant Inspector of Nuisances :**

A. J. BIRKBECK.

### **Health Visitors :**

Miss TURNER. Mrs. MEAKIN, C.M.B.

### **Clerks :**

Miss W. BEARDSLEY. J. H. MENNELL.  
Miss WATERHOUSE.

### **Veterinary Inspector :**

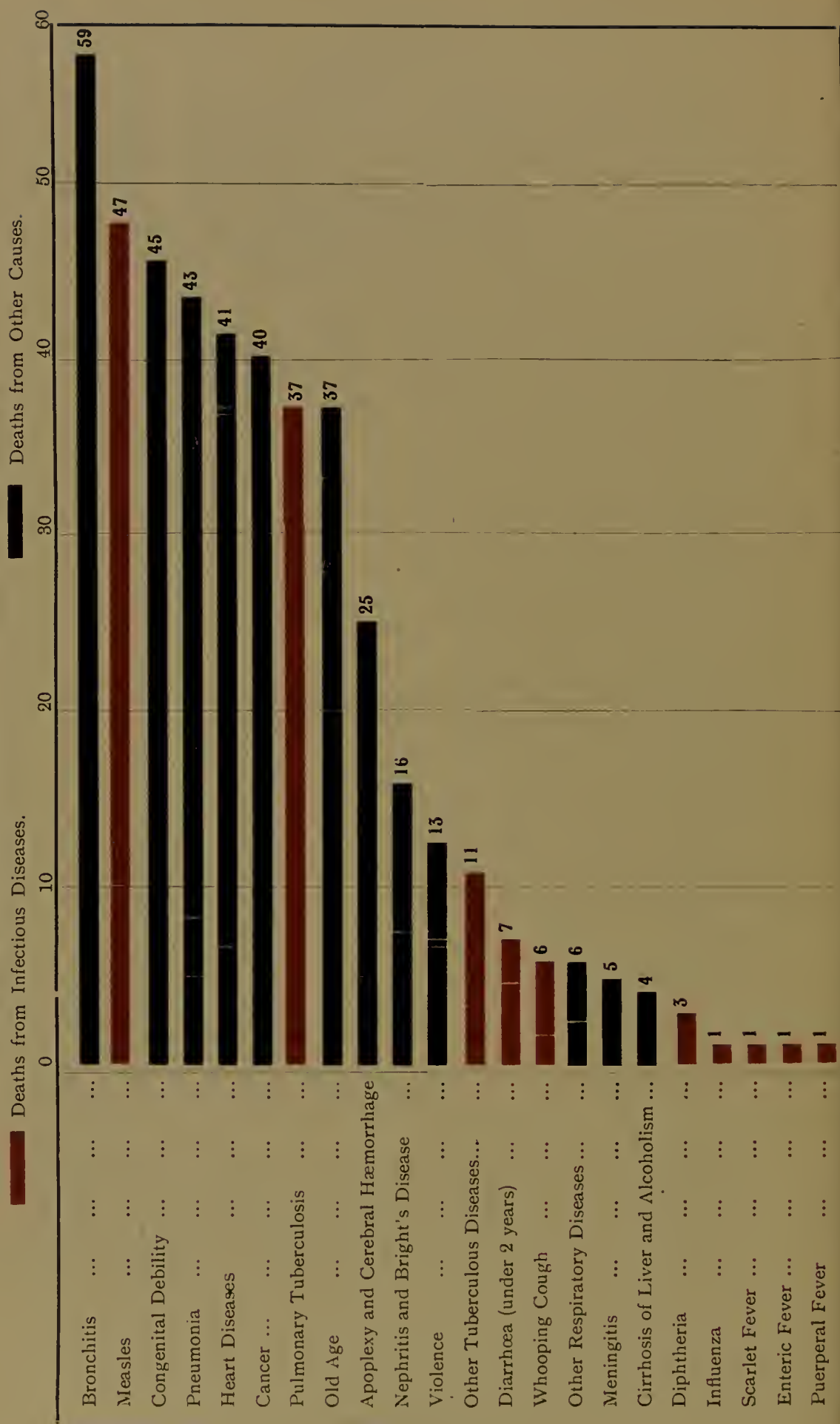
G. ROBINSON, M.R.C.V.S.

# INDEX.

	Page
Administration of the Milk and Cream Regulations, 1912	18
Bacteriological Examination ... ..	37
Billeting of Troops ... ..	28
Birth Rate ... ..	71—72
Cases of and Deaths from Infectious Diseases ... ..	46
Causes of, and Ages at Death during the Year 1915 ... ..	60
Common Lodging Houses ... ..	17
Dairies, Cowsheds, and Milkshops ... ..	19
Death Rate ... ..	57
Diarrhœa and Enteritis ... ..	50
Diphtheria ... ..	35, 41
Deaths from Tuberculous Diseases ... ..	53
Diseases Ill-defined or Unknown ... ..	62
Diseases, Other Defined ... ..	61
Erysipelas ... ..	40
Enteric Fever ... ..	36, 47
Food and Drugs ... ..	17
Foods Destroyed ... ..	23
Factory and Workshop Report ... ..	30
House Refuse ... ..	13
Hospital Accommodation ... ..	32
Housing ... ..	24
House Demolition ... ..	26
Houses Empty, June 30th, 1915 ... ..	24
House to House Inspections ... ..	25
Health Committee ... ..	3
Illegitimacy ... ..	71
Infant Welfare ... ..	65—70
Infant Mortality ... ..	72—77
Infectious Diseases Notified during the Year 1915 ... ..	39
Inquests ... ..	58—59
Introduction ... ..	5—8
Meteorological Record, 1915... ..	10
Means for Preventing Mortality in Child Birth... ..	63—70
Measles ... ..	49
Meat Inspection ... ..	21
Monthly Incidence of Scarlet Fever and Diphtheria ... ..	44
Notifications of Infectious Disease and Attack Rates ... ..	45
Ophthalmia Neonatorum ... ..	52
Penmore Hospital ... ..	34
Penmore Tuberculosis Pavilion ... ..	36
Population in the Middle of 1915 ... ..	11
Preparation of Food ... ..	20
Prevention of Flies ... ..	28
Puerperal Fever ... ..	49
Summary of Annual Health Report for 1915 ... ..	9
Sewage Disposal ... ..	12
Smoke Nuisance ... ..	14
Summary of Sanitary Inspector's Work ... ..	15
Summary of Sanitary Work of Recent Years ... ..	16
Schools ... ..	17
Sanitary Conveniences ... ..	27
Smallpox ... ..	40
Scarlet Fever ... ..	35, 40
Tuberculous Diseases ... ..	52—56
Vital Statistics of Separate Localities in the Borough ... ..	78
Vital Statistics of the District ... ..	79
Water Supply ... ..	12
Whooping Cough ... ..	51



# CHART SHOWING PRINCIPAL CAUSES OF DEATH, 1915.





*Public Health Department,*

*Saltergate,*

*Chesterfield,*

*May, 1916.*

*To the Chairman and Members of the Public Health  
Committee of the Borough of Chesterfield.*

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Gentlemen,—

I beg to submit my first Annual Report on the Health of the Borough for the year 1915.

STATISTICS.—The statistics for the year are not so satisfactory as those of 1914. The mortality rates are higher and the birth-rate lower. It must be observed that these rates are based on an estimate of the civil population supplied by the Registrar General, viz.: 37653 (a population only 200 above the census population 1911). Had they been calculated on a population estimated as in previous years which would have given the figure of 40950, the death-rate would have been considerably lower and the birth-rate would have shown a still greater diminution.

The Birth-rate is the lowest on record.

It must be remembered that in these abnormal times a lowered Birth-rate and a higher Death-rate have been general throughout the country.

MEASLES.—During the first six months of the year an epidemic of measles raged and caused a large mortality—no fewer than 47 deaths occurred in the Borough from this disease which is usually considered a trivial ailment, while Scarlet Fever and Diphtheria together only accounted for 4 deaths. At the time measles was not

a notifiable disease; hence was not under the administrative control of the Health Department, but at the end of the year the Local Government Board issued Regulations making this disease compulsorily notifiable. These Regulations, although they entail a large increase of work to the Department, are welcomed as a means of control of this appalling and unnecessary waste of child life. It is hoped also, in the future, after the completion of the new Wards, to be able to remove selected serious cases of Measles to Penmore Isolation Hospital.

HOUSING.—The Housing question is one which deserves the serious consideration of your Committee. On June 30th, 1915, only 7 houses suitable for the working classes were found vacant in the Borough. Cases of overcrowding have been frequent, and there is no doubt that a "house famine" does exist, and this fact has considerably hampered the Health Department in dealing with insanitary dwellings. Although, during war time, it is impossible to launch forth on a housing scheme, yet the preparation of such a scheme should be proceeded with forthwith, submitted to the Local Government Board for approval, and so enable a loan to be sanctioned without delay for the execution of the scheme.

CONVERSION SCHEME.—Unfortunately, for financial reasons, the scheme for the conversion of privy middens has had to remain in abeyance till after the War.

No definite and maintained improvement in the health of the Borough can be hoped for until the numerous privy middens have been abolished and the housing conditions improved.

INFANT WELFARE.—One of the results of this colossal War has been to raise the value of human life, and to focus the attention of the country on the great and serious question of Infant Mortality. At the present time the conservation of infant life is the problem which is being considered by many Municipal Authorities. It is pleasing to record that Chesterfield has been to the fore in this work. The chief administrative measure carried out during 1915 was the establishment of the New Infant Welfare Centre, Lordsmill Street, and the provision of a second Health Visitor.

With an Infant Consultation Centre for each Ward and the New Centre in Lordsmill Street for the treatment of Summer Diarrhoea and other infantile ailments, the Borough is now well equipped in this campaign for the preservation of Infant life.

The Local Government Board contributes one half of the cost of administering this Infant Welfare Scheme, including the salaries of the Health Visitors.

It is noteworthy that the number of deaths from Summer Diarrhoea in children under two years of age was the lowest on record. Although this decrease was mostly due to the climatic conditions which prevailed, yet some of the credit must be given to the work of the Centre.

The fact that the Infant Mortality rate has risen, despite all this Infant Welfare work, has given rise to some comment and criticism, but one must recognise that we are living in most exceptional times, that the Infant Mortality rate has risen throughout the country, and any improvement can only be a gradual one, so that time must elapse before the educative work of the Clinics is reflected by a permanent improvement in the Infant Death Rate.

I, personally, have no doubt as to the immense good which will ultimately result from the Infant Welfare work being done in the Borough.

In this connection it is important to remember that 35% of the total deaths of infants in the Borough occur within a month of birth, and these deaths are due largely to adverse conditions operating on the mother before birth. Those deaths from antenatal causes are not influenced by the present work of the Health Visitors and Clinics. For this reason I would strongly advocate the further provision of a Maternity Centre and Antenatal Clinic to which expectant mothers would come for advice and treatment. Experience has already shown the great need there is for getting into touch with the mother before the birth of the child.

The Department is much indebted to Mrs. Crosse, Miss Richards, Mrs. Tucker, and Miss Smith, and the numerous other voluntary workers who have so zealously worked for the success of the different Baby Clinics.

Thanks must also be tendered to Miss Twelves and the members of the Women's Adult School for their excellent work in connection with the banana-crate cradle scheme.

In conclusion, I have with pleasure to record my indebtedness to all my colleagues in the Health Department, and to you, Gentlemen, for your great courtesy and kindness to me.

I am,

Your Obedient Servant,

R. FRASER.

# SUMMARY

## OF ANNUAL

# HEALTH REPORT FOR 1915.

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### **BOROUGH OF CHESTERFIELD.**

---

*Area*—Land, less inland water, 2625 acres; inland water, 18 acres; total, 2643 acres.

*Altitude* (average)—About 300 feet above ordnance datum.

*Population*, Census for 1911—37,406. Separate occupiers or families, 7,711.

*Estimated Civil Population*—37,653.

*Occupied Houses*—8,418.

*Rateable Value*—£149,909.

*General District Rate*—4/3 in the £.

*Poor Rate*—5/- in the £.

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#### VITAL STATISTICS, 1914 and 1915, per 1000 living.

	1914.	1915.
Birth Rate ... ..	29.6	27.1
Crude Death Rate ... ..	16.7	18.2
Death Rate (corrected) ... ..	13.5	15.3
Epidemic Diseases Death Rate ...	1.1	1.7
Pulmonary Tuberculosis Death Rate ...	1.03	.98
Other Tuberculous Diseases Death Rate	.34	.29
Respiratory Diseases Death Rate ...	2.36	2.86
Infant Mortality per 1000 births ...	103	112

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*Isolation Hospitals*—Penmore Isolation and Small Pox Hospitals.

*Water Supply*—From Linacre Reservoirs and Holymoorside Whispering Well.

# METEOROLOGICAL RECORD, 1915.

Rain Gauges, 5 inches in diameter at Gas works and 8 inches at Linacre Reservoir, 1 foot above ground ;  
279 feet above sea level at Gas Works, and 500 feet at Linacre Reservoir.  
Temperature taken in shade and 4 feet from the ground.

MONTH.	Temperature of Air during Month.			Mean Temper- ature of Air	Rainfall					
	Highest	Lowest	Mean of		Number of Days on which Rain Fell.		Amount Collected in Inches			
			All Highest						All Lowest	
January ...	56	30	43°67	33°09	38°38	Gas Works 14	Linacre Reservoir 21	Sewage Works 16	Linacre Reservoir 4°22	Sewage Works 2°67
February ...	52	23	44°60	32°32	38°46	15	17	16	4°78	3°42
March ...	63	20	48°87	33°00	40°93	9	12	9	1°08	'60
April ...	72	26	54°26	36°43	45°34	11	14	12	1°13	'92
May ...	78	28	61°51	40°32	50°91	8	10	7	1°08	1°06
June ...	83	32	69°70	44°70	57°20	4	4	4	1°01	'82
July ...	76	40	66°48	49°29	57°88	11	20	13	3°88	3°38
August ...	75	40	68°09	49°41	58°75	13	16	15	2°76	2°12
September ...	74	31	64°96	44°30	54°63	4	6	4	'86	'65
October ...	63	27	54°35	39°48	46°91	7	10	9	1°12	1°09
November ...	54	18	43°83	32°16	37°99	9	14	10	2°56	2°40
December ...	54	27	45°67	35°38	40°52	19	25	27	5°95	6°46
Entire Year	83 (a)	18 (b)	55°44	39°15	47°32	124	169	142	25°28(c)	34°16(d) 25°59(e)

(a) June 8th. (b) November 27th. (c) Greatest amount on one day, 1'73 on July 16th and 1'32 inches on Nov. 12th

(d) Greatest amount on one day, 1'53 inches on November 12th.

(e) Greatest amount on one day, 1'20 inches on July 16th and November 12th.



# REPORT.

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## A. Natural and Social Conditions of the District.

POPULATION IN THE MIDDLE OF 1915.—Estimated by the natural increase—that is, the excess of births over deaths—the population is 39,564. No account is taken here of immigration and emigration. Estimated according to the method of the Registrar-General, which assumes that the population increases or decreases in a geometrical ratio in any intercensal period at the same rate as in a previous one, the figure is 39,800. Calculated by new houses certified for occupation, less those houses closed, since the Census, plus the difference between houses empty at Census and empty on June 30th, 1914, and corrected for large institutions, the figure is **40,950**. The figure which is used as the basis of the rates in this report is **37,653**, an estimate of the civil population only, received from the Registrar-General.

The population is divided as under (the figures given being approximate only), and calculated on the presumption that the number of empty houses at the Census in the various Wards was in the same proportion as in June, 1914:—

### WARDS.

North.	South.	West.	Central.
9064    ...	8550    ...	10236    ...	9803

It is impossible to give any details as to the number of marriages in the Borough, as the area for registration is the Poor Law Union, which includes a large area around the Borough. The same applies to figures relating to Poor Law Relief.

In the middle of the year there were 402 inmates in the Workhouse, and 120 patients in the Chesterfield and North Derbyshire Hospital. I am indebted to Mr. Sunnuck for the following table, showing the steadily increasing use made of the Hospital:—

Year		In-patients treated.		Out-patients treated.
1902	...	490	...	2103
1903	...	580	...	2390
1904	...	618	...	2701
1905	...	653	...	3764
1906	...	763	...	3944
1907	...	921	...	4193
1908	...	866	...	4725
1909	...	897	...	4687
1910	...	1091	...	5540
1911	...	1102	...	4895
1912	...	1225	...	4716
1913	...	1212	...	5059
1914	...	1398	...	4365
1915	...	1397	...	3737

## B. Sanitary Circumstances of the District.

**WATER SUPPLY.**—Water is supplied by the Chesterfield Gas and Water Board, whose area of supply includes the Borough, the Urban Districts of Whittington and Newbold, Brampton and Walton, and part of the Chesterfield Rural District. The area supplied is 24 square miles in extent.

The greatest part is collected on a gathering ground above the Linacre Reservoir of 1,386 acres, but there are other works as given below, while a small supply can be obtained in time of need from the mains of the Chesterfield Rural District Council.

Capacity of Reservoirs, 247,746,000 gallons.

Lowest quantity stored during the year, 67,000,000 gallons.

In 1912 the lowest quantity was 209,279,000 gallons

Present daily consumption, 1,200,000 gallons.

Number of houses supplied, 15,016.

**SEWAGE DISPOSAL.**—The Works outfall for the major portion of the sewage is at Stonegravels, while other works at Penmore and Calow Lane treat the sewage from their respective districts.



The main works consist of detritus pits intended to arrest the heavy solids from passing into the tanks. The sewage is then screened of its large floating matter and passed on to three open sedimentation tanks. These have a capacity of 223,200 gallons. After passing slowly through the tanks the sewage gravitates to a tank at the pumping station near the destructor, where it is raised by a pump to a sufficient height to allow of its flowing by gravitation to the filters. The power necessary to pump the whole of the sewage and also work the sludge presses is obtained from the combustion of the house refuse. The pump delivers the tank effluent on to filters, 20 in number, constructed of destructor clinker. The effluent is distributed by revolving sprinklers. The final effluent is collected from the different filters and discharged into the River Rother. The sludge from the sedimentation tanks is drawn off into a sludge well, mixed with lime, and pressed into cakes. The pressed cake in normal times is sought by farmers, but during harvest times is left to accumulate. Storm water is treated in a large tank to arrest the solids previous to its passage to two filters, also constructed of clinker and distributed by means of revolving sprinklers. The amount of sewage treated at the main works averages 1,297,727 gallons per day. The maximum amount pumped on any one day was 2,890,500 gallons. The character of the sewage is difficult to treat at times because of waste matter from a sulphate plant at the Gas Works and trade waste from a cotton bleaching works. The trade waste waters from these bleaching works have at various times been discharged into the River Hipper, causing a most offensive nuisance. This trade waste now undergoes treatment by passing through a filter, which, to a slight extent, purifies the effluent, which is then discharged into the Borough sewers.

HOUSE REFUSE.—The amount of refuse removed during the year ending 31st December, 1915, was 18,332 loads, against 18,991 loads for the year previous, a decrease of 659 loads.

The decrease in the amount removed may be accounted for by the difficulty in obtaining labour towards the later months of the year, and to the enlistment of several of our regular men.

The destructor disposed of 13,141 loads, or 71.6 per cent. of the refuse collected, the remaining 5191 loads being tipped into the disused clay pits.

The Committee, after considering the difficulty of obtaining labour and the increased price of horses, decided to try motor haulage, and eventually purchased a Clayton Steam Wagon. This wagon arrived on the 28th December, and will assist us in reducing the nuisance at Storforth Lane Tip. This tip received the contents of the 746 privy middens in the South Ward and a similar class of refuse from an adjacent portion of the Central Ward. The Motor Wagon will enable us to convey a great portion of this midden refuse to the destructor, and so reduce the nuisance caused by the tip.

The addition of two cells to our destructor is urgently required in order that all the midden refuse from the South Ward may be dealt with, and thus remedy this serious tip nuisance.

The cost of collecting the refuse amounted to £2690 16s. 4d., against £2557 3s. 10d. for the previous year, an increase of £133. The number of tenements from which refuse is collected is 8632. The average cost per tenement being 6s. 2 $\frac{3}{4}$ d., as against 6s. 2d. for 1914. The cost per 1000 inhabitants being £67 5s. The cost in labour alone in emptying privy middens being 5s. 1d. per tenement, while that for dustbins works out at 3s. 5d.

**SMOKE NUISANCE.**—The town suffers to an extent which many of its inhabitants little realise by the contamination of the air by the emission of black smoke from furnace chimneys. The Public Health Act says that any furnace or fireplace must be so constructed as to consume as far as practicable the combustibles used therein, otherwise it shall be deemed a nuisance. As far as this district is concerned the section appears to be treated with indifference. Dense volumes of smoke issuing from factory chimneys for a prolonged period of time is a common sight in Chesterfield. Much of this smoke nuisance is preventable, and, as complaints have been numerous, the matter is one which will need attention in less critical times.

## Sanitary Inspections of the District.

## SUMMARY OF SANITARY INSPECTOR'S WORK.

Nature of Cases dealt with.	Ward.				Total
	North	South	West	C'tral	
Visits to houses infected with Phthisis .. .. .	20	35	54	15	124
Ditto other Zymotic Diseases ..	143	97	154	85	479
Inspection of dwelling houses ..	47	31	155	86	319
" of factories .. .. .	5	5	11	52	73
" of workshops .. .. .	28	5	30	37	100
" of premises used for offensive trades ..	29	37	4	69	139
" of slaughter houses ..	139	112	633	874	1758
" of cowsheds and dairies ..	16	50	42	23	131
" of bakehouses .. .. .	12	..	30	49	91
" of common lodging-houses	26	..	56	44	126
" of drainage of new houses	5	39	61	18	123
Re-inspection of work in progress ..	528	472	813	711	2524
<b>Total Inspections ..</b>	<b>998</b>	<b>883</b>	<b>2043</b>	<b>2063</b>	<b>5987</b>
Houses disinfected after Phthisis ..	6	17	28	12	63
Houses disinfected after other Zymotic Diseases .. .. .	45	51	48	31	175
Schoolrooms disinfected .. .. .	17	12	15	4	46
Number of notices issued for abatement of nuisances	37	29	68	42	176
formal .. .. .	118	68	135	123	444
informal .. .. .					
Houses repaired .. .. .	17	22	31	35	105
" cleansed and limewashed ..	4	3	11	7	25
" overcrowded .. .. .	2	1	5	3	11
Waste pipes defective .. .. .	12	3	5	4	24
Defective and obstructive drains ..	31	36	47	42	156
" traps and drain inlets ..	39	22	39	80	180
Insanitary privies and middens ..	11	3	8	9	31
Insufficient closet accommodation ..	..	..	..	..	..
Privies converted into water closets	25	14	63	32	134
Water closets defective .. .. .	30	1	34	22	87
Yard surfaces repaired .. .. .	21	25	47	41	134
Eaves and downspouts .. .. .	12	11	22	27	72
Urinals .. .. .	..	1	..	2	3
Animals improperly kept .. .. .	1	2	1	2	6
Offensive accumulations .. .. .	11	6	24	12	53
<b>Total ..</b>	<b>216</b>	<b>150</b>	<b>337</b>	<b>318</b>	<b>1021</b>

## Summary of Sanitary Work of Recent Years.

	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Houses closed by Magistrates' Order	..	..	..	..	3	..	..	..	..	..
Houses closed after formal notice	..	5	11	5	..	4	14	30	7	7
Houses closed after informal notice	..	2	1	2	1	2	2	2	10	1
Houses demolished or disused	..	..	1	3	11	30	7	37	20	21
Houses made fit for habitation	..	13	10	35	33	9	13	16	7	13
Houses repaired	..	29	26	22	156	143	65	161	241	105
Yards repaired	..	34	82	108	90	95	54	130	109	134
Overcrowding	..	25	21	21	30	42	28	29	10	11
Houses inspected	..	1393	760	1174	1016	1219	996	636	703	319
Conversion of Privy Middens	..	24	31	41	64	111	147	205	243	134
Formal	} Notices served for the abatement of Nuisances.	28	47	150	139	216	96	446	429	176
Informal		316	289	475	867	915	617	358	553	444

COMMON LODGING HOUSES.—There are 11 on the register and all, with one exception, are now provided with water-closets. The houses have been well conducted, but the number of persons patronising them has been greatly reduced. Three of the houses are very old, and, as the accomodation is now in excess of the requirements, a reduction in their number would be to the good of the town. The question of a municipal lodging-house for the Borough might with advantage be taken up, and, if adopted, could do much to decrease the many evils existing in this class of house, and also provide shelter for women.

The keepers have been notified of the occurrence of cases of smallpox within a near distance of Chesterfield, so that the Sanitary Authority may be notified of the arrival of contacts.

SCHOOLS.—The Medical Officer of Health is also the Medical Officer to the Education Committee. The work of School Medical Inspection is reported on elsewhere.

FOOD AND DRUGS.—112 samples of food were sent to the Borough Analyst, Mr. G. E. Scott-Smith, for analysis. Of these 110 proved to be genuine, while 2, or 1.7 per cent., were found not to comply with the Standard adopted by the Board of Agriculture.

Of 60 samples of Milk 2, or 3.33 per cent., were found not genuine. Number 115 was deficient in non-fatty solids to the extent of 1.20 per cent. Proceedings were taken and the vendor fined 15s. and 5s. costs. Number 122 was deficient in milk fat to the extent of 17.6 per cent. This being a first offence it was decided that the retailer be cautioned. Subsequent samples complied with the standard. Three were submitted for analysis by two cowkeepers resident in the Borough, which were found to comply with the Standard adopted by the Board of Agriculture.

During the year 2 samples of preserved cream were submitted for analysis. Both samples contained Boron preservatives in the proportion of .35 and .37 per cent.

Three samples of milk, 9 of butter and 3 of cheese were purchased informally. All proved to be genuine.



No samples have been dealt with other than by submission to the Public Analyst.

NATURE OF FOOD.	Number of Samples obtained.	Number Genuine.	Not Genuine.	Prosecutions	Convictions.	Dismissed.	Cautions.
Milk .. ..	60	58	2	1	1	..	1
Butter .. ..	25	25	..	..	..	..	..
Cheese .. ..	7	7	..	..	..	..	..
Lard .. ..	..	..	..	..	..	..	..
Margarine ..	10	10	..	..	..	..	..
Preserved Cream ..	2	2	..	..	..	..	..
Baking Powder ..	1	1	..	..	..	..	..
Mustard Condiment ..	1	1	..	..	..	..	..
Ground Rice ..	3	3	..	..	..	..	..
Cocoa .. ..	..	..	..	..	..	..	..
Pepper .. ..	3	3	..	..	..	..	..
Total .. ..	112	110	2	1	1	..	1

#### PROSECUTIONS, 1915.

Date.	Number of Sample.	CHARGES.	Result	Penalty.	Costs.
10th June	115	Selling Milk deficient in non-fatty solids to the extent of 1.2 % .. ..	Convicted	£ s. d. 0 15 0	£ s. d. 0 5 0

#### Report for the Year ending 31st December 1915, upon the Administration of the Milk and Cream Regulations, 1912.

##### 1.—Milk and Cream not sold as Preserved Cream.

	(A). Number of Samples examined for the presence of a preservative.	(B). Number in which a preservative was reported to be present.
Milk ... ..	50	1
Cream ... ..	1	..

## 2.—Cream Sold as Preserved Cream.

(a) Number of Samples submitted to the Borough Analyst to ascertain if the statements on the label as to preservatives were correct:—

(i).	Correct statements made	...	...	1
(ii).	Statements incorrect	...	...	0

Total	...	...	...	1
-------	-----	-----	-----	---

(b) Determinations made of milk fat in cream sold as preserved cream:—

(i).	Above 35 per cent.	...	...	1
(ii).	Below 35 per cent.	...	...	0

Total	...	...	...	1
-------	-----	-----	-----	---

Each of the Samples obtained complied with the requirements of Public Health (Milk and Cream) Regulations, 1912.

The following is a summary of the work of the last ten years:—

	No. of samples taken.	Number Genuine	Number adulterated.	Percent-age adulterated.	Cau-tioned.	Prose-cutions.	Total Amount of fines and costs imposed.
1906	79	74	5	6.3	3	2	£ s. d. 2 6 0
1907	80	76	4	5.0	3	1	dismis'd
1908	83	80	3	3.6	2	1	2 3 0
1909	85	82	3	3.5	...	3	1 18 6
1910	83	77	6	7.2	1	4	7 17 6
1911	105	101	4	3.7	...	4	10 17 6
1912	104	99	5	4.8	1	4	4 9 6
1913	106	103	3	2.7	2	1	1 11 0
1914	108	101	7	6.4	2	1	1 2 6
1915	112	110	2	1.7	1	1	1 0 0

DAIRIES, COWSHEDS AND MILKSHOPS.—There are 20 cowsheds in the Borough, housing 131 cows. The sheds have been frequently inspected by the Medical Officer of Health and the Sanitary Inspector. Twelve milkshops have been regularly inspected and no com-

plaint made except as to the usual neglect of keeping the milk bowl efficiently covered, a most important detail which is frequently overlooked by the shopkeepers.

Sect. 82 of the Corporation Act, 1914, applies the Regulations for securing the cleanliness of milk vessels used for containing milk for sale to all vessels used for the reception, storage, or delivery of milk by persons selling milk by retail in the streets.

The chief fault one has to find with the cowkeeper in the Borough is the dirty ungroomed condition of the cows so frequently met with. Very commonly one finds that the animal's body is "plastered" with excremental matter, a large portion of which finds its way into the milk during the milking progress. Much of the milk we drink has been thoroughly contaminated by bacteria which have gained entrance during the act of milking. This "dirty" milk undoubtedly tends to the production of many ailments in young children.

"The milker should be constantly on his guard to prevent faecal contamination." He should wear clean overalls, his hands should be scrupulously clean, and the cows should be thoroughly cleansed. As has been shewn by Sir Thos. Barlow's milk committee much of the contamination occurring during milking can be prevented by the use of a special pail, which is covered except for a small opening to allow the milk to enter.

**PREPARATION OF FOOD.**—During the year all premises used for the preparation of food were inspected.

A special inspection has been made of the 26 fried fish shops in the Borough, with reference to the new Byelaws adopted by the Council in 1914.

Five of the slaughterhouses, occupied by small traders, are occasionally used for chopping up and boiling of food. This practice must be strongly condemned, as no food should be made up in premises where offensive matter is handled. In the future licenses for slaughterhouses will be opposed when the food preparation premises are not quite distinct from the slaughtering booth.

Twenty-one bakehouses are all used jointly for bread baking and confectionery, and are in a satisfactory condition. All are on the ground level.



**MEAT INSPECTION.**—Since the appointment of an additional Inspector in 1913, great progress has been made in the work of Meat Inspection. The table below shews the marked advance in this work during 1915 as compared with 1914.

The year's work compared with that of 1914.

	Visits to Slaughter-houses.	Cattle Inspected.	Sheep Inspected.	Pigs Inspected.	Beasts found suffering from Tuberculosis.	Percentage of Tuberculous Animals of those Inspected.	Diseased Meat and Organs Destroyed.			Total Weight of All Foods Destroyed.			
							cwt.	qrs.	lbs.	T.	C.	Q.	Lbs.
1914	699	1007	954	247	21	2.08	9	3	10	1	4	3	10
1915	1685	1568	1753	591	42	2.67	19	1	9	2	1	2	19

It is noteworthy that the quantity of diseased meat seized and destroyed in 1915 was twice as great as that seized in 1914.

The percentage of inspected animals in relation to the approximate number killed in the Borough is as follows: Beasts, 52.26; Sheep, 23.3; Pigs, 9.85; or 23.7 of the total number slaughtered.

The number of visits to slaughterhouses was 1685, i.e., 56 visits per annum, or 1.07 visits to each slaughterhouse per week. In addition 77 visits were paid to shops and 104 to the weekly market.

The relationship between frequent and systematic inspection and the amount of unsound meat found is brought out by Table B.

RELATIONSHIP OF SUPERVISION TO QUANTITY OF DISEASED MEAT FOUND.

Year.	Total Number of Visits to Slaughter-houses.	Frequency of Individual Visits.	Weight of Meat and Organs Seized or Surrendered after Inspection.		
			Cwt.	Qrs.	Lbs.
1913	364	1 visit each month	0	0	0
1914	699	1 visit every 2 weeks	9	3	10
1915	1685	1.07 visits each week	19	1	9

These figures are striking and illustrate the great need there was for systematic visits of inspection to slaughterhouses in the Borough. Inspector Carter, who devotes the greater part of his time to the work of meat inspection, must be given credit for his excellent work in this connection.

As the slaughterhouses are distributed throughout the Borough, and killing is being carried on in most of them at the same time, the inspection is still not as thorough as one would wish. During one period of the year slaughtering on Sunday was a frequent occurrence.

It has been our endeavour to induce the butchers to send notice to the Health Office when on slaughtering an animal some disease has been found. Each case so notified would be dealt with as leniently as possible, consistent with the interests of the general public. In only two instances however, was the Inspector asked to view doubtful carcasses. In one case the meat was passed and in the other surrendered voluntarily for destruction.

The work of meat inspection has been carried on with little friction. No prosecutions were instituted under sect. 117, P.H.A., 1875, but proceedings were taken against a pork butcher for killing in unlicensed premises and a fine of 10s. imposed.

There are in the Borough 33 slaughterhouses, licensed for the slaughter of cattle, sheep, and pigs, seven of which are the property of the Corporation. Two applications were received for licences for new slaughterhouses one only being granted. The ward distribution of the slaughterhouses is as follows: Central, 14; North, 3; South, 4; and West, 12. They have been kept in fairly good condition as regards cleanliness, structural repairs, limewashing and removal of offal. It has been found necessary to occasionally call the occupiers' attention to these matters.

Many of the slaughterhouses are indiscriminately placed amongst the dwellinghouses of inhabitants, and the site of the Corporation slaughterhouses is far from the ideal. Their position is now very public, being overlooked by the surrounding dwellings. A new central site could easily be obtained for the erection of a Public Abattoir. In the interests of the public this plan should be seriously considered in the future.

Eighteen Butchers have a stand in the Saturday market, some of whom bring their meat already dressed from the neighbouring districts. Now that the work of meat inspection in the Borough is being more and more thoroughly carried out, a certificate of inspection from their own district should be required from outside butchers selling in the Chesterfield market.

**Table showing Weights of various Foods destroyed.**

					Tons.	Cwts.	Qrs.	lbs.
Tuberculous and Unsound Beef	...					7	0	19
"	"	"	Organs, &c.			11	1	18
Unsound Mutton	...	...	...	...		0	3	0
Herrings	...	...	...	...		6	2	0
Cod	...	...	...	...		1	2	0
Cockles	...	...	...	...		1	0	0
Spratts	...	...	...	...		1	1	0
Fillets	...	...	...	...			2	0
Mussels	...	...	...	...		3	0	0
Prawns	...	...	...	...			3	0
Tinned Fish	...	...	...	...			2	4
Tinned Fruit and Milk	...	...	...	...			3	6
Rabbits	...	...	...	...		5	0	0
Eggs	...	...	...	...		1	2	0
					2	1	2	19

Troops were quartered in the town up to the end of April at four different centres, viz.: Industrial Schools, Skating Rink, Ragged School, and Spital House. Fifty-three early morning visits were paid to inspect the meat delivered for their consumption.

The meat on the whole was of good quality. One Tuberculous brisket was seized.

The catering was in the hands of one firm who sublet for their supplies to various local tradesmen.

The Board of Agriculture asked for a summary of the number and classes of Beasts, Sheep, and Pigs slaughtered in the Borough during the month of June, particular regard being paid to calves and lambs.

Thanks are due to the Hide and Skin Company and the pork butchers for their co-operation in arriving at a correct figure for the required return.

With the view of allowing young stock to come to maturity and thus increase the home supply of meat, the Maintenance of Live Stock Order, 1915, came into operation after September 30th, making it an offence to slaughter calves under 6 months old or any cow or pig obviously parturient.

Exceptions from these restrictions exist where

- (1) A calf put up for sale by public auction fails to realise more than 30s.
- (2) Calves of specified breeds.
- (3) When slaughter is desirable on account of injury or illness.
- (4) When slaughter is licensed by the Board.

Maintenance of Live Stock Order, 1915, has since been amended, the reserve price being raised to 40s., and the prescribed dairy breeds have been deleted.

HOUSING.—Since the outbreak of war and the consequent need for strict economy, the work under the Housing Acts has naturally been relaxed, and during the year housing conditions which were an actual nuisance and danger to the health have only been dealt with.

Attention has already been drawn to the great scarcity of houses for the working classes. The appended table shews that only seven houses with a rental under £18 per annum were found empty on June 30th, 1915.

HOUSES EMPTY JUNE 30TH, 1915.

RENTS.		North Ward.	South Ward	Central Ward.	West Ward.	TOTAL.
3/6 per week (Rates inclusive)		...	...	1	1	2
4/-	"	...	...	1	3	4
4/6	"	...	...	...	1	1
10/-	"	...	...	...	...	...
£ s. d.						
18 0 0	per year and Rates	...	...	1	...	1
20 0 0	"	...	1	1	...	3
25 0 0	"	...	...	1	...	1
30 0 0	"	...	3	...	1	4
35 0 0	"	...	1	...	...	1
40 0 0	"	...	...	1	...	1
50 0 0	"	...	2	...	...	2
		7	1	6	6	20

Cases of overcrowding have been frequent. There are many insanitary and unhealthy areas in the town which must eventually be cleared if the public health is to be improved, but no action can be taken until a Housing Scheme has been initiated.

The following table summarises the House to House Inspections under the Housing and Town Planning Act:—

Number of Houses Inspected.	STREET	Back to Back.	Through Houses.	Single houses having through ventilation.	Single houses having no through ventilation.	Number of defects found.	Number of Water Closets.	Number of houses using privies.
9	Ashgate Road ...	0	9	0	0	2	6	3
7	Bank Street... ..	0	7	0	0	2	5	2
21	Barker Lane ... ..	0	21	0	0	18	0	21
16	Boythorpe Road ...	0	14	1	1	15	4	8
17	Brewery Yard ... ..	0	1	7	9	17	0	17
10	Brunswick Street ...	0	10	0	0	5	2	6
6	Charles Street ... ..	0	6	0	0	1	4	2
49	Chatsworth Road ...	0	38	10	1	12	10	22
7	Chester Street ... ..	0	7	0	0	0	4	3
19	Derby Road... ..	0	19	0	0	11	0	19
7	Durrant Road ... ..	6	1	0	0	2	3	1
14	Factory Street ... ..	0	14	0	0	13	0	14
8	Hipper Street ... ..	0	8	0	0	4	0	8
12	Hoole Street ... ..	0	12	0	0	2	0	12
6	John Street ... ..	0	6	0	0	0	0	6
8	Lordsmill Street ...	0	4	4	0	2	0	8
37	Low Pavement ... ..	0	0	34	3	0	12	13
7	Shepley Street ... ..	0	7	0	0	7	0	7
11	Soresby Street ... ..	4	7	0	0	4	3	5
9	South place ... ..	0	0	4	5	9	0	9
6	Sterland Street ... ..	0	6	0	0	0	2	4
15	Victoria Street West	0	15	0	0	9	8	6
10	Wharfe ... ..	0	10	0	0	4	0	10
8	West Bars ... ..	0	3	3	2	5	0	8
319		10	225	63	21	144	63	214

The following houses were certified as fit for occupation during the 12 months ending June 30th, 1915:—

North.	South.	Central.	West.
3 ...	33 ...	15 ...	24

Total since Census 1911:—

North.	South.	Central.	West.
53 ...	217 ...	81 ...	245

Closed by action of the Council, or voluntarily during 12 months ending June 30th, 1915:—

North.	South.	Central.	West.
0 ...	0 ...	7 ...	6



Total since Census 1911:—

North.	South.	Central.	West.
8	5	69	11

There were at the Census 7,609 occupied houses, and 235 unoccupied. There were 8,327 occupied houses, and 20 empty houses on June 30th, 1915.

Of the 319 houses inspected during the year, 105 were repaired after informal notice, and without reporting their condition to the Health Committee.

The owners of 15 dwellings neglected to repair their houses after the service of an informal notice and considered the times were convenient for pleading poverty though rents could be collected from the occupiers.

The conditions of the houses were such as to necessitate reporting to Committee and the making of Closing Orders. Thirteen of the houses were afterwards made habitable, the Corporation doing the work. The other two dwellings have been improved by the demolition of a warehouse, thus giving more air space to the houses, and by the provision of pantries for the storage of food.

The Demolition Orders outstanding last year for 4 houses in Low Pavement were carried out by the owner and the site asphalted. This provides a drying ground and more air space to the adjoining cottages. A similar improvement was made by the demolition of a cottage off Saltergate, the site of which nearly doubled the open air space to 8 houses.

Demolition Orders were made against three other houses, two of which have been vacated, but, owing to the scarcity of houses of the smaller type, the Order was not enforced.

#### HOUSE DEMOLITION TO DECEMBER 31st, 1915.

	Demolition Order.	Demolished without further legal formalities after receipt of notice to repair.	Demolished for Public Street Improvements.	Demolished for Private Improvements.	Demolition Order outstanding.
1911	4	2	24	0	0
1912	5	0	2	0	0
1913	12	0	20	5	11
1914	1	7	10	2	5
1915	5	1	9	6	11
Totals	27	10	65	13	27

## WARD DISTRIBUTION OF DEMOLISHED HOUSES.

		North.		South.		West.		Central.
1911	...	4	...	2	...	0	...	24
1912	...	0	...	0	...	0	...	7
1913	...	4	...	5	...	3	...	25
1914	...	1	...	1	...	2	...	16
1915	...	0	...	0	...	6	...	10
		—		—		—		—
Totals	...	9	...	8	...	11	...	82
		—		—		—		—

## OUTSTANDING DEMOLITION ORDERS.

		North.		South.		West.		Central.
1913	...	0	...	0	...	0	...	11
1914	...	0	...	0	...	1	...	4
1915	...	0	...	0	...	0	...	11

SANITARY CONVENIENCES.—The following table shows approximately the number and types of sanitary conveniences in each Ward:—

Ward.	Number of Tenements.	W.Cs.	W.W.Cs.	Pails.	Privies.	Bins.	Ashpits.	Middens.
North ...	1920	1047	38	3	572	843	218	324
South ...	2021	526	16	11	1394	368	132	759
Central	2179	1165	89	4	507	971	161	245
West ...	2512	1070	170	23	1034	1153	94	587
Total ...	8632	3808	313	41	3507	3335	605	1915

From the above table it will be seen the number of privies converted is 134, against 243 for the year previous. It has taken nine years to convert 1000 privies into water-closets, a number which might have been reached this year had not the War broken out and prevented the Treasury from sanctioning the loan asked for the purpose of privy conversion. Although there are still many privy middens in the town, which are a nuisance to the neighbourhood, it was felt that unless the nuisance was aggravated by a 'leakage, or the building rendered dangerous from want of repair, the conversion work should not be pressed too hard upon owners. Another trouble was the great increase in the cost of materials and the difficulty of obtaining labour.

As the number of privies in the town is without doubt one of the chief factors in our unsatisfactory health

condition, it is hoped that immediately the War is over a much greater effort will be made to reduce the time originally allotted to complete the work of conversion.

**BILLETING OF TROOPS.**—About 600 men, forming the 3/6 Sherwood Foresters, were billeted for some time in the town, in 175 private houses.

The billets were regularly inspected, and attention drawn to any irregularities found.

In one house, accomodating 9 men, the air space per man averaged 128 cubic feet, while in another it averaged 190 cubic feet. These, however, were only isolated cases.

At a later period a detachment of troops occupied the Industrial Schools, the Skating Rink, Spital House, and the Ragged School. The schools made excellent barracks, being equipped with ample sanitary accomodation. Temporary latrines had to be provided in each of the other buildings.

The Health Department co-operated with the Military Authorities in every way possible. The food supplies for the troops, provided by local contractors, were regularly supervised.

**PREVENTION OF FLIES.**—After a special report had been submitted to the Health Committee on this subject, a campaign against the fly pest was inaugurated in May, 1915. Posters were exhibited, and pamphlets distributed from house to house, calling attention to the danger from flies. Under sect. 50, P.H.A., 1875, public notice was advertised in the local papers calling for the periodical removal of manure and other refuse.

#### NUMBER OF MANURE RECEPTACLES in Chesterfield.

North Ward	...	...	66
South Ward	...	...	47
Central Ward	...	...	83
West Ward	...	...	88

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284

As the chief breeding place of flies is collection of horse manure and stable refuse this large number of manure receptacles, many of them situated in close



proximity to dwelling-houses, and none of them efficiently covered, is undoubtedly a menace to the public health, and must influence the Infant Death Rate from Zymotic Diarrhœa.

A circular letter was sent to the occupiers of these premises calling for the weekly removal of manure, and asking their co-operation with a view to minimising the fly nuisance. It cannot be said that this periodical removal of manure was satisfactorily carried out, and, moreover, the manure pits are usually emptied in a careless unsatisfactory fashion.

This work, if it is to be done effectively, should be carried out by the Corporation. The supervision of the Sanitary Inspector would ensure that the manure pits were properly emptied and periodically limewashed.

When excessive prevalence of flies was reported to the Health Office from a privy midden area, the middens were well disinfected with chloride of lime, and formaline was also supplied for the killing of flies in the homes.

**Annual Report of the Medical Officer of Health for the Year 1915, for the Borough of Chesterfield on the Administration of the Factory and Workshop Act, 1901, in connection with Factories, Workshops, Workplaces, and Homework.**

**I.—INSPECTION.**

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of	
	Inspections.	Written Notices.
Factories (including Factory Laundries) ...	73	3
Workshops (including Workshop Laundries)...	330	16
Workplaces (other than Outworkers) ...	131	10
Total ... ..	534	29

**2.—DEFECTS FOUND.**

Particulars.	Number of Defects	
	Found.	Remedied.
<i>Nuisances under the Public Health Acts:</i>		
Want of Cleanliness ... ..	16	16
Want of Ventilation ... ..	2	2
Overcrowding ... ..	...	...
Want of Drainage of Floors ... ..	1	1
Other Nuisances ... ..	17	17
Sanitary Accommodation { insufficient ... ..	...	...
{ unsuitable or defective ... ..	5	5
{ not separate for sexes ... ..	1	1
Total ... ..	42	42

### 3.—HOMEWORK.

Outworkers' Lists, Section 107.										
Nature of Work.	Lists received from Employers.					Addresses of Outworks.				
	Twice in the year.		Once in the year.			Received from other Councils.		Forwarded to other Councils.		Inspections of Out-workers.
	Outworkers.		Outworkers.			Workmen.		Workmen.		
	Lists.	Con-tractors.	Work-men.	Lists.	Con-tractors.	Work-men.	Con-tractors.	Work-men.		
Wearing Apparel making, &c. ...	2	1	10	2	2	3	1	1	3	14
Lace, lacecurtains and nets ...	4	2	55	...	...	...	2	3	38	58
Total ...	6	3	65	2	2	3	3	4	3	72

### 4. REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.	Number.
Bakehouses ...	21
Dressmakers ...	17
Milliners ...	14
Joiners, Cabinet Makers and Wood Workers ...	19
Tailors ...	19
Saddlers ...	5
Sugar Boilers ...	4
Smiths (tin and iron) ...	10
Boots and Clogs ...	20
Plumbers ...	8
Other Trades ...	39
Total number of Workshops on Register ...	176

### C. Sanitary Administration of the District.

HOSPITAL ACCOMMODATION.—Penmore Isolation and the Smallpox Hospital are the property of the Chesterfield Joint Hospital Committee, which consists of representatives of the Brampton and Walton, the Newbold and Whittington Urban District Councils, and the Corporation of Chesterfield.

The accommodation at Penmore consists of—

(1) Scarlet fever block. Two wards, measurements 48ft. 4ins. by 26ft. by 13ft., and 36ft. 3ins. by 26ft. by 13ft.; cubical capacity 16,325 and 12,252 cubic feet; beds 14, with two small observation wards of one bed each.

(2) Enteric block. Two wards, measurements 33ft. 8ins. by 26ft. by 13ft., and 24ft. by 26ft. by 13ft.; cubical capacity 11,356, and 8,112 cubic feet. Beds 10.

(3) Isolation block. Three wards, measurements 13ft. by 16ft. by 26ft., and 13ft., by 13ft., by 17ft., and 13ft. by 13ft. by 17ft.; cubical capacity 5,408, 2,873, and 2,873 cubic feet. Beds 5.

There are also an administrative block, steam laundry, disinfecting block with steam disinfecter, discharge room, ambulance and bedding van, sheds, stable, and mortuary. The hospital and grounds occupy about three acres of land, and there are nine acres in reserve for possible extension.

Population served: The Hospital supplies the needs of the Borough of Chesterfield, population at 1911 census 37,406; the Whittington and Newbold Urban District, 1911 census 17,284; and the Brampton and Walton Urban District, census population 2,124; total 56,814. When Penmore was first opened in January, 1905, the estimated population of the combined districts was 47,560.

Other accommodation: By arrangement with the North Derbyshire Hospital District, cases of infectious disease requiring isolation may, when accommodation for them is not available in the hospital serving the District to which they belong, be mutually transferred.

There is also the Newbold Smallpox Hospital, transferred in 1912 to Spital Smallpox Hospital site.

The Chesterfield and North Derbyshire Hospital and the Union Infirmary are also prepared to take in cases

of enteric fever; in the latter case, Poor Law patients are only admitted.

Under a scheme submitted by the County Council a 14 bedded pavilion for the reception of advanced cases of pulmonary tuberculosis has been erected, and was opened on January 1st, 1915.

Infected articles are removed, disinfected and returned free of charge on application being received from the sanitary officials of the constituent authorities.

Newbold Hospital, now removed to the Spital Small-pox Hospital site, provides accomodation for 22 patients in two wards, one of which is fitted with red glass windows. It has a small administration block, providing accomodation for the caretakers and one nurse, and a washhouse and mortuary. It has a water supply from the mains of the Chesterfield Gas and Water Board, and a small sewage disposal works on the bacterial purification system.

The charge to constituent authorities, i.e.—Chesterfield Borough, Whittington and Newbold Urban District and the Brampton and Walton Urban District, for the maintenance of patients in the Hospital is 1s. 3d. per diem. For cases belonging to the North Derbyshire Hospital District, 2s. per diem, for cases from the Union Workhouse, 3s. per diem, and for cases from other districts, 30s. per week.

The erection of a new Scarlet Fever block of 20 beds, and a large extension to the administrative block was commenced but not completed in 1915. These new buildings will be ready for occupation early in 1916. The extra accomodation provided by the extension to the administrative block consists of 13 bedrooms, nurses' and maids' dining rooms, kitchen, etc.

The number of nurses' bedrooms added is slightly in excess of the present requirements, but it has been proposed that one or more nurses may be retained at the Hospital in addition to the normal staff, who may be lent to other Isolation Hospitals in the county in times of stress.

During the extensive alteration to the administrative block it was found necessary to utilise the Enteric block

for administrative purposes, i.e., kitchen, dining rooms, etc., so that during the greater part of the year only the Scarlet Fever and Isolation blocks have been available for the isolation of patients.

This limited accomodation made it necessary to carefully select cases for admission, and many cases had to be refused, which, in normal times, should have been removed to Hospital.

WORK AT PENMORE HOSPITAL, 1915.—The staff now consists of a Non-resident Medical Officer, Matron, two Sisters, three Staff Nurses, and eight Probationers; there are also a Cook, two Housemaids, four Wardmaids, and a Non-resident Porter and Laundress.

The following table shews the number of cases treated since the Hospital was opened (Dec. 1904).

Year.	Scarlet Fever.	Diphtheria.	Enteric.
1905	46	4	5
1906	34	3	12
1907	26	1	5
1908	40	2	14
1909	164	...	5
1910	85	...	8
1911	105	10	16
1912	187	...	...
1913	157	60	...
1914	168	71	...
1915	117	39	7

The authorities responsible for the cases are as follows:—

Constituent Authorities.	Scarlet		Enteric.
	Fever.	Diphtheria.	Fever.
Borough	82	29	5
Whittington & Newbold U. D.	35	8	2
Brampton & Walton Urban District	...	1	...
<b>Other Authorities.</b>			
Chesterfield Rural District	...	1	...
	<hr/>	<hr/>	<hr/>
Total	117	39	7

Included above, amongst the Borough cases, are three soldiers, viz., Enteric Fever 2, Diphtheria 1. There were also admitted four other military cases Measles 2,



Erysipelas 1, and a doubtful case of cerebro spinal fever, which, however, proved not to be a true case of Meningitis.

#### SCARLET FEVER:—

Cases admitted	117
Deaths	1
Case Mortality	.8%

The majority of the cases were of a mild type. There were two severe toxic cases, one of which died while the other made a good recovery after large doses of antistreptococcal (scarlatina) serum.

Mild "clean" cases were only detained in Hospital for a period of five weeks; every endeavour being made to have the child ready for discharge on the 35th day of illness. Experience has shewn that the longer a case is detained in hospital the greater the chance of giving rise to a return case.

The Hospital Return Cases, that is, cases infected by patients discharged from Penmore numbered 3 or 2.5%

The 82 cases of Scarlet Fever admitted from the Borough were selected from among the 126 notified on the ground that isolation could not be found at home, that is to say, the 44 cases isolated at home occurred in larger houses where the proportion of persons per bedroom was smaller than in the 82 cases removed to hospital.

The figures below bring out this point.

	Average No. of Bedrooms.	Average No. of Persons per House.	Average No. of persons per Bedroom.
Home Cases ...	3.05	5.75	1.82
Hospital Cases...	2.6	6.57	2.53

#### DIPHTHERIA:—

Cases admitted	39
Deaths	4
Case Mortality	10.2

It was only possible to admit the more serious cases of diphtheria because of the limited number of beds available.

There were two laryngeal cases requiring tracheotomy, one of whom died, and two were of the hæmorrhagic type, both proving fatal.

Of the 39 cases of diphtheria admitted 16 had been given injections of antitoxine before admission, and 3 had received antitoxine by mouth. The oral administration of antitoxine is a practice which must be condemned. Serum given by mouth has little or no antitoxic action, and, in a severe case of diphtheria, where early injection is of vital importance valuable time is thus wasted and the patient's life endangered. Approximate time of admission of diphtheria cases:—

On 1st day of illness,	2 cases.
„ 2nd „ „	3 „
„ 3rd „ „	6 „
„ 4th „ „	7 „
„ 5th „ „	9 „
After 5th „ „	12 „
	—
	39
	—

Of the four diphtheria deaths 3 were admitted after the 5th day of illness, and in only one case had antitoxine been administered before admission.

#### ENTERIC FEVER:—

Cases admitted	7
Deaths	1

Seven cases (including two military cases) were admitted, one of whom, a soldier, died from perforation. All these seven cases gave positive “widal” reactions, and before discharge in each case a specimen of urine and fæces was sent to the County Laboratory to be examined for Bac. Typhosus.

PENMORE TUBERCULOSIS PAVILION.—This pavilion was opened on January 1st, 1915. Patients sent by the County Medical Officer are admitted from all parts of the county. The pavilion is intended for the more advanced cases of tuberculosis, who are unsuitable for Sanatorium treatment.

Number admitted during 1915	52
Insured Patients	40
Number who died in Penmore	5



Fifty were cases of pulmonary tuberculosis, while one was a spinal case, and the other a case of tuberculous hip joint.

Twelve of the total cases belonged to the Borough.

Tubercle Bacilli were demonstrated in the sputum of 44 cases.

Number of Cases.	Improved.	Stationary.	Worse.	Dead.
52	28	12	7	5

As Walton Sanatorium was not opened till March 1915, a few of the earlier cases admitted to Penmore were Sanatorium cases and later were transferred to Walton.

The first year's work at the Pavilion has not been entirely satisfactory. It has been found difficult to induce patients to remain for any length of time. This specially applies to patients coming from a distance who are not able to receive frequent visits from their relatives.

### BACTERIOLOGICAL EXAMINATION.

DIPHTHERIA.—The Borough is fortunate in having at its service the Laboratory maintained at Derby by the County Council. Dr. Barwise has on several occasions remarked that sufficient use of the aid afforded by a Bacteriological Examination is not made.

Thus in 1912 there were 44 cases of diphtheria and 16 swabbings from the throat sent for examination. In 1911, 77 cases and 41 swabs; and in 1910, 47 cases and 66 swabs. During the last three years, with the co-operation of the Medical Practitioners of the town swabs were taken in a more systematic manner. They are tabulated below:—

	Penmore Hospital.				Medical Practitioners		Medical Officer of Health.		Totals.		
	Diagnosis.		Discharge.		Positive	Negative	Positive	Negative	Positive	Negative	Grand Total.
	Positive	Negative	Positive	Negative							
1913	33	54	16	111	63	18	40	340	152	523	675
1914	31	91	37	222	61	5	108	652	240	973	1213
1915	25	51	23	156	25	5	22	227	95	439	534

The swabs taken by the Medical Officer of Health last year comprise 92 from children in schools suffering from sore throats, of which 13 were positive; 59 from children in schools who were school contacts of actual cases, 1 proving to be positive, and 98 were taken of cases and home contacts to ascertain if the household was free of infection; of these 8 showed the presence of the diphtheria bacillus.

ENTERIC FEVER.—Seven specimens of blood were sent during the year for the Widal Test, 6 of which were positive and 1 negative, and 6 specimens of urine and faeces for *Bacillus Typhosus*, all of which were negative.

SPUTUM EXAMINATION.—Fourteen specimens were sent for the purpose of ascertaining whether the patient was suffering from pulmonary tuberculosis. Fourteen were positive.

MILK EXAMINATION.—Five samples of milk were obtained from retailers for bacteriological examination.

Tubercle Bacilli was found in one sample which came from a farm outside the Borough, the milk being mixed from a herd of 24 cows. Eight further samples located the affected animal in a shed containing 9 other cows. The farmer and the Local Authority, in whose district the farm is situated, were informed of the result, and the necessary precautions taken to prevent the milk from the affected animal being sold for human consumption. We were afterwards informed that the diagnosis of the Bacteriologist was confirmed at the time the animal was slaughtered.

**D.—PREVALENCE OF AND CONTROL  
OVER ACUTE INFECTIOUS DISEASES.**

**TABLE II. Cases of Infectious Diseases notified during the year 1915.**

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.												
	AT ALL AGES	At Ages Years							Total cases notified in each Locality.				Total Cases Removed to Hospital.
		Under 1.	1 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.	North Ward.	South Ward.	Central Ward.	West Ward.	
Small-pox...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera. Plague	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous croup)	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Relapsing fever, Continued fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Polio-myelitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia Neonatorum	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...
Other forms of Tuberculosis...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	330	15	64	154	33	44	20	...	85	78	69	98	134

ISOLATION HOSPITALS:—Penmore Hospital, Chesterfield; Small-Pox Hospital, Spital, Chesterfield.

SANATORIA:—Walton Sanatorium, Chesterfield; Penmore Tuberculosis Pavilion, Chesterfield.

(Both under the control of the Derbyshire County Council.)

(Not included in Table II are two military cases of enteric fever and one of erysipelas.)

The number of cases of infectious diseases notified was 330, compared with 522 for the year 1911.

The deaths were 52 inclusive of 48 from tuberculosis. The number of deaths from the non-notifiable infectious diseases, i.e., measles, whooping cough, influenza, diarrhoea, and respiratory diseases, was 170.

SMALLPOX.—No case occurred for the tenth year in succession.

ERYSIPELAS.—There were notified 22 cases of erysipelas (including one military case). There were no deaths.

#### SCARLET FEVER:—

Cases notified	126
Deaths	1
Case Mortality	.78%

Mortality rate from Scarlet Fever during each of the past ten years (per 1000 living):—

Year	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Rate per 1000.	.06	.06	.06	.03	.15	.10	.20	.05	.17	.02

Mortality rate from Scarlet Fever 1915 (per 1000 living):—

England and Wales	...	.06
96 Great Towns	...	.07
148 Smaller Towns	...	.06
Chesterfield	...	.02

One hundred and twenty-six cases were notified, as compared with 196 in 1914, and 70 in 1913, and a decennial average of 122. They composed 73 females and 53 males.

The age distribution was as follows:—

			1-2	2-5	5-10	10-15	15-20	20-25	25-30	Over 30-35	35	Ttl.
Male	...	...	...	16	24	9	2	1	1	...	...	53
Female	...	...	...	15	41	7	6	...	2	2	...	73

The Ward distribution was as follows:—

#### WARDS.

	North.	South.	Central.	West.	Children's Homes.	The C. & N. D. Workhse.	Hospital.
Cases	31	35	24	25	1	7	3

As regards the class of house, 126 were through houses. Of the cases notified, 34 occurred in four-roomed, 29 in five-roomed, and 43 in six-roomed houses, and 20 in larger houses. The sanitary accommodation was privy middens in 58 cases, water closets in 64 cases, and waste water closets in 4 cases.

**SCHOOLS AND SCARLET FEVER.**—In July, 1915, a small outbreak of Scarlet Fever occurred in a school. Seven cases were notified within a short time from one class. The school was visited by the Medical Officer and each child in the affected class inspected individually. Lists of absentees were obtained from the teacher and each absentee visited. A child was found in the affected class shewing signs of Scarlet Fever “peeling” and two missed cases of Scarlet were found amongst the absent scholars.

No further case occurred in the class after isolation of these cases.

The probable source of infection was as follows:—

Infected by case discharged from Penmore Hospital	3
Direct contact with previous case in house ... ..	25
Contact with school case ... ..	12
Indirect contact, i.e., with person who has been in contact but does not himself contract disease	5
Primary Cases ... ..	81

82 cases were removed to Penmore Hospital. There was one death.

The number of cases was 3 per cent. above the decennial average of 122. The case mortality was .7 per cent., as compared with a decennial average of 4 per cent.

#### DIPHtheria.—

Cases notified	81
Deaths	3
Case Mortality	3.7%

Mortality rate from Diphtheria during the past ten years:—

Year	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Rate per 1000	0.6	0	.35	.32	.09	.26	.05	.10	.12	.07

Mortality rate from Diphtheria 1915 (per 1000 living):

England and Wales	...	.15
96 Great Towns	...	.16
148 Smaller Towns	...	.15
Chesterfield	...	.07

The year 1915 was marked by a considerable diminution in the prevalence of Diphtheria, 81 cases being notified as compared with 155 in 1914.

The case mortality was at the rate of 3.7 per cent. as compared with 3.2 per cent. in 1914, 3 per cent. in 1913, 6.8 per cent. in 1912, and 13 per cent. in 1911.

The monthly incidence is shown in the table on page 14.

Diphtheria is peculiarly a disease of direct contact, the influence of school attendance being very marked. Thus out of a total of 55 cases attending Public Elementary Schools 9 were scholars at the Central Schools and 19 at Brampton.

The number of cases notified is larger than would have been the case, but for the extensive use made of Bacteriological aids to diagnosis. There were three deaths. I attribute the low mortality to the extensive use of antitoxin, the prompt isolation at Penmore of severe cases, and early diagnosis. There is no doubt that no case of diphtheria should die of that disease provided antitoxin treatment is given early enough. The procedure in a case of diphtheria is as follows:—

(1) SCHOOL CASE.—The school is visited and the children who sat next to the child notified are inspected and swabs taken of their throats, on an average eight such children are examined. 59 children were examined of which 1 showed the presence of the diphtheria bacillus. Those who are carriers, i.e., children who have no symptoms but who have positive swabs are excluded from school and seen again each week until a negative swab



is obtained. The schoolroom is disinfected by spraying walls, floors, desks, writing boards, pencils and blackboards, with 1 in 100 formalin solution.

(2) SCHOOL CASES AND OTHERS.—(a) Case removed to hospital. All the other children at home are swabbed and excluded for a period of 14 days. If any one of them prove to be a carrier, all are excluded until a negative swab is obtained. The room occupied by the patient is disinfected by formalin vapour. The patient is not discharged from Penmore until two successive negative swabs are obtained from the throat and nose.

(b) Case isolated at home. When the request for disinfection is received from the Medical Practitioner in charge of the case, the throats of the other children in the house are swabbed as above, generally the swab from the patient is taken by the Medical Attendant. In this case the disinfection includes removal of bedding to the steam disinfector at Penmore. In future with the additional staff at Penmore it will be possible to steam disinfect bulky articles in every case of infectious disease whether isolated at Penmore or at home.

Houses infected 70, cases 81, deaths 3.

The age distribution of the cases is as follows:—

	1-2	2-5	5-10	10-15	15-20	20-25	25-30	30-35	Over35	Ttl.
Male	1	9	19	8	...	1	1	...	...	39
Female...		7	19	10	3	...	1	1	1	42

The Ward distribution is as follows:—

North Ward.	South Ward.	Central Ward.	West Ward.
14	12	14	41

Of the cases notified 5 occurred in three-roomed houses, 21 in four-roomed, 16 in five-roomed, 29 in six-roomed houses, and 10 in larger houses.

The probable source of infection was as follows:—

Direct contact with previous case in house	...	...	10
Contact with School cases	...	...	16
Indirect contact	...	...	4
Primary	...	...	51

Privy middens were the sanitary accomodation in 37 cases, W.C.'s in 39 cases, and Waste Water Closets in 5. In 7 per cent. of the cases a recent visit to a place of amusement, chiefly picture palaces, had taken place within the probable incubation period of the disease.

### Monthly Incidence of Scarlet Fever and Diphtheria.

1915.	Scarlet Fever.	Diphtheria.
January ... ..	20	10
February ... ..	12	8
March ... ..	7	10
April ... ..	10	3
May ... ..	10	4
June ... ..	16	9
July ... ..	15	3
August ... ..	6	2
September ... ..	7	7
October ... ..	8	...
November ... ..	7	7
December ... ..	8	18
Total ...	126	81

The schools attended by diphtheria and scarlet fever cases were as follows:—

School.	Average Attendance.	Scarlet Fever Cases.	Diphtheria Cases.
Derby Rd. (Girls and Infants) ...	441	4	1
Vicar Lane ...	255	3	3
Old Road ...	378	8	6
Derby Rd. (Boys) ...	211	4	...
St. Thomas ...	311	1	1
Soresby Street ...	260	3	2
Hasland C. of E. ...	332	2	2
Christ Church ...	174	1	...
Central ...	834	6	11
Hasland Eyre Street ...	248	12	1
St. Helen's ...	620	18	5
Hipper Street ...	560	4	5
Brampton ...	966	6	19
St. Mary's ...	295	...	1
Spital ...	55	...	...
Grammar School ...	...	2	1
Girls' High School ...	...	3	1
Cases not attending School but having other members of house attending ...	...	23	14
Cases in which there are no children from house of school age	...	26	8
Total	126		81

## NOTIFICATIONS OF INFECTIOUS DISEASE AND ATTACK RATES, 1915

	Estimated Civil Population in the middle of 1915.	Small- Pox.		Scarlet Fever.		Diph- theria.		Enteric Fever.		Puerper'l Fever.		Ery- sipelas.	
		Cases.	Rate.	Cases.	Rate.	Cases.	Rate.	Cases.	Rate.	Cases.	Rate.	Cases.	Rate.
Administrative													
County ... ..	553990	...	...	2703	4.88	966	1.74	94	0.17	41	0.07	313	0.56
County Borough of Derby...	119072	...	...	815	6.84	296	2.49	16	0.13	10	0.08	93	0.78
Aggregate of Bor- oughs and Urban Districts ... ..	284948	...	...	1251	4.39	515	1.81	49	0.17	25	0.09	154	0.54
Aggregate of Rural Districts ... ..	269042	...	...	1452	5.40	451	1.68	45	0.17	16	0.06	159	0.59
Glossop ... ..	20665	...	...	103	4.98	9	0.44	3	0.15	3	0.15	11	0.53
Ilkeston ... ..	30859	...	...	128	4.15	71	2.30	11	0.36	1	0.03	6	0.19
Chesterfield Rural	71888	...	...	573	7.97	107	1.49	3	0.04	8	0.11	43	0.60
CHESTERFIELD ...	37653	...	...	126	3.35	80	2.12	7	0.19	3	0.08	21	0.56

**TABLE.—Showing the Number of Cases of and Deaths from Infectious Diseases during recent years.**

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	Decennial Average.	1915
Notifiable Diseases.												
SMALLPOX :												
Cases ..	53	..	..	..	..	..	..	..	..	..	5.3	..
Deaths ..	1	.	.	..	..	..	..	..	..	..	.1	..
DIPHTHERIA & MEMBRANOUS CROUP :												
Cases ..	19	19	17	39	115	47	77	44	132	155	66.4	81
Deaths ..	3	2	..	11	10	3	10	2	4	5	5.0	3
ERYSIPELAS :												
Cases ..	34	39	40	42	21	28	46	23	25	33	33.1	22
Deaths ..	..	1	1	1	..	2	2	2	2	..	1.1	..
SCARLET FEVER :												
Cases ..	116	63	53	68	272	104	97	188	70	196	122.7	126
Deaths ..	8	2	2	2	1	5	4	8	2	7	4.1	1
ENTERIC FEVER :												
Cases ..	15	17	8	23	10	10	8	3	2	..	9.6	7
Deaths ..	4	5	3	5	1	1	1	1	2	..	2.3	2
PULMONARY TUBERCULOSIS :												
Cases ..	Not	Not	Not	Not	28	51	52	122	112	73	..	64
Deaths ..	29	31	30	35	47	25	44	41	42	42	36.6	37
OTHER TUBERCU- LOUS DISEASES }												
Cases ..	Not	Not	Not	Not	..	..	..	82	55	..	..	18
Deaths ..	15	23	10	30	29	15	16	15	23	14	19.0	11
PUERPERAL FEVER												
Cases ..	2	3	2	2	6	3	4	1	3	5	3.1	3
Deaths ..	..	1	..	..	..	1	..	..	2	3	.7	1
CEREBRO SPINAL FEVER & ACUTE POLIOMYELITIS }	Not Notifiable.							2	..	..	..	..
OPHTHALMIA NEONATORUM }	Not Notifiable.							..	..	5	..	12
Non-Notifiable Diseases.												
DEATHS ONLY :												
DIARRHŒA AND ENTERITIS }	26	44	27	41	27	36	86	14	47	16	36.4	7
MEASLES ..	7	4	9	7	9	8	36	2	29	4	11.5	47
WHOOPING COUGH	6	8	10	9	2	6	5	12	1	12	7.1	6
RESPIRATORY DISEASES }	84	66	89	107	83	70	88	85	105	95	87.2	108

## ENTERIC FEVER.—

Cases notified	7
Deaths	2

The seven notified cases include two military cases. Of the two deaths one was a soldier who died from perforation at Penmore Hospital, while the other was a female, aged 23, who died at home.

Mortality per 1000 of civil population:—

96 Great Towns ...	...	.04
England and Wales	...	.04
148 Smaller Towns	...	.04
Chesterfield	...	.02

Mortality from Enteric Fever during past ten years:

Year	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Rate per 1000	.17	.10	.16	.03	.03	.02	.02	0.5	0	0.2

# Summary of Notified Enteric Cases, 1915.

Progressive Number.	Ward.	Age.	Sex.	Occupation.	Sanitary Convenience.		Nuisances.	REMARKS.
					W.C.	Privy		
1	C.	37	M.	Private Royal Engineers	...	...		Patient was home on leave. Disease contracted at Chatham. Had been inoculated. Disease very mild. Origin obscure. Case died at home.
2	C.	23	F.	Domestic Servant	...	1	Unpaved yard	
3	N.	29	M.	Private Territorii's	1	...		Billetted with three other men in a private house. Patient frequently visited a yard in which case 4 lived. Case died at Penmore Hospital.
4	N.	4	F.		1	...		Treated at Chesterfield Hospital. Father and uncle recently suffered from enteric at Conisbro, mother had visited. A history obtained of diarrhoea commencing after a meal of fried fish.
5	N.	34	M.	Grocer's Assistant	1	...	Complaint made of foul smells from privy midden only 6 feet from patient's house. House had been infested with flies	
6	S.	32	F.	Housewife	...	1	A very wet privy midden	Patient's child died 14 days previous to this notification from enteritis.
7	C.	26	F.	Housewife	...	1	Outstanding closing order on this house	Husband also ill, but gave negative "widal."



**PUERPERAL FEVER.**—There were three cases notified and one death. The cases were duly reported by the Health Visitor to the County Medical Officer of Health (the Officer of the Local Supervising Authority) and the appropriate action taken, viz., suspension of the midwife until her effects were disinfected, and disinfection of the bedding, and room of the patient.

**MEASLES.**—Measles was not a notifiable disease until the introduction of the Measles Regulations, which became operative January 1st, 1916. Previous to that the only information obtainable was by the system of school notification by teachers and attendance officers of cases coming to their knowledge. 181 cases were thus notified, but this of course does not represent all the cases. Measles was very prevalent during the first and second quarters of the year, and caused a large mortality—no fewer than 47 deaths as against 4 in 1914, 29 in 1913, 2 in 1912, and 36 in 1911. It will be seen from the chart at the beginning of this report shewing the different causes of death that measles was the second greatest cause of death during the year.

Mortality rate per 1000 living:—

96 Great Towns ...	... .50
148 Smaller Towns ...	... .52
England and Wales ...	... .43
Chesterfield ...	... 1.2

Measles mortality per 1000 population:—

Year	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Rate per 1000	.13	.3	.22	.28	.25	.95	.05	.73	.09	1.2

Of the 47 fatal cases (25 were males and 22 females) the ages were as follows:—

Under 1 year ...	... 12
Over 1 and under 2 years	17
Over 2 and under 5 years	15
Over 5 years ...	... 3

## Monthly Incidence of Deaths:—

January	...	4
February	...	9
March	...	15
April	...	12
May	...	4
June	...	3

## Ward distribution:—

Central	10	West	18
North	8	Hospital	1
South	7	Workhouse	3

## Season:—

1st quarter	...	...	28
2nd quarter	...	...	19
3rd quarter	...	...	—
4th quarter	...	...	—

Much of this large measles mortality is due to ignorance as to the dangerous character of the disease, and frequently young children are wilfully exposed to infection.

As measles is specially fatal to young children under five years of age (44 out of the 47 deaths occurred under five years) every effort should be made to postpone attack from measles till after this age by strictly segregating the younger children from infective cases.

Excessive mortality from measles is also usually associated with conditions of overcrowding and bad housing conditions.

It is noteworthy that on an average 11,000 deaths occur annually in England and Wales from measles, a disease which is generally considered a trivial ailment which every child must go through.

DIARRHOEA AND ENTERITIS.—There were 7 deaths from this disease during the year, 4 under the age of 1 year and 3 under 2 years.

Mortality Rate, Diarrhoea and Enteritis (under 2 years) in 1915, per 1000 births:—

96 Great Towns	...	24.48
148 Smaller Towns	...	17.15
England and Wales	...	18.18
Chesterfield	...	6.8

Mortality rate from diarrhoea during the past ten years:—

Rate per 1000 Births.	Ten Yrs. average.	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
	37.84	29.8	53.01	31.6	45.1	30.4	41.3	78.1	12.7	43.1	13.3	6.8

Ward distribution:—

North.	South.	Central.	West.
1	3	2	1

Season.—The monthly incidence of the diarrhoea deaths was May, 1; June, 1; September, 3; October, 1; November, 1.

FEEDING.—Of the 4 children under one year of age 3 were bottle-fed. No information could be obtained of the remaining case, which died in a travelling van.

As Chesterfield has long been noted for its excessive infant death-rate from Summer Diarrhoea, it is gratifying to record the lowest death-rate on record from this disease, and a death-rate which is considerably lower than that which prevailed generally in the county.

WHOOPIING COUGH.—There were 6 deaths from Whooping Cough as compared with 12 for 1914. Two of the fatal cases were males and 4 females.

Mortality rate, 1915, per 1000 living:—

96 Great Towns ...	.23
148 Smaller Towns ...	.22
England and Wales ...	.21
Chesterfield ...	.15

Ward distribution:—

West.	North.	Central.
3	2	1

Cases of Whooping Cough notified by school teachers are visited by the Health Visitor, who leaves a pamphlet advising as to isolation, etc.

The Health Visitor has frequently reported the gross carelessness of people taking young babies into houses where an infective case of Whooping Cough exists. Whooping Cough is very fatal to infants under one year, and every precaution should be taken so that their infection may be prevented.

## OPHTHALMIA NEONATORUM.—

Cases notified	12
----------------	----

Three of the notified children died before the end of the year.

Ward distribution:—

Central.	North.	South.	West.
2	1	5	4

**DAMAGE TO EYESIGHT.**—It is most unsatisfactory to record that of the 12 cases notified 4 resulted in permanent damage to the cornea of one eye, while in one case the child was left totally blind in both eyes.

During the latter part of the year notified ophthalmias were kept under constant supervision by the Health Visitors, who visited twice daily in bad cases. If not under a private practitioner the babies were brought to the Infant Welfare Centre for treatment. Eye douches and argyrol drops were supplied to the mothers so that treatment could be done frequently at the home.

One hopes in the future that it will be possible to remove serious cases of ophthalmia (mother and child) from unsatisfactory homes to Penmore Isolation Hospital where they can receive the continuous treatment so necessary if the eyes are to be saved.

The cases were all reported to the County Medical Officer of Health and investigated by the Inspector of Midwives. Representations were made to the County Medical Officer with regard to the careless conduct of two midwives in connection with two severe cases of ophthalmia with the result that these two midwives were finally removed from the roll.

**TUBERCULOUS DISEASES.**

Total number of Notifications of Pulmonary Tuberculosis,	
1915	64
Deaths from Pulmonary Tuberculosis	37
Notifications of other forms of Tuberculosis	18
Deaths from other forms of Tuberculosis	11

The total number of deaths from Tuberculous Diseases is 48, as compared with 56 in 1914, 69 in 1913, and 56 in 1912.

The deaths from Pulmonary Tuberculosis numbered 37, as against 42 in 1914, 42 in 1913, and 41 in 1912. Compared as death-rates these figures represent respectively .98, 1.03, 1.06, and 1.07 per 1000 of the population.

Table III. on page 57, showing ages at death of these cases of Pulmonary Tuberculosis, demonstrates that most of the deaths occurred between the ages of 25 and 45; 18 or 48% occurring at these age periods.

As regards other Tuberculous Diseases the greatest mortality was amongst children under 5 years, who contributed 7 out of the 11 deaths. Of the 11 deaths Tuberculous Meningitis caused 6 and Abdominal Tuberculosis 5 deaths.

#### Deaths from Tuberculous Diseases.

Year	Phthisis Pulmonalis.		Other Tuberculosis Diseases.		Totals.
	Males.	Females.	Males.	Females.	
1901	27	23		19	69
1902	18	11		20	49
1903	19	9		19	47
1904	18	12		20	50
1905	13	16		15	44
1906	15	16		23	54
1907	14	16		10	40
1908	20	15		30	65
1909	24	23		29	76
1910	15	10		15	40
1911	23	21		16	60
1912	18	23		15	56
1913	26	16	15	12	69
1914	20	22	7	7	56
1915	17	20	5	6	48
Totals	287	253		283	823

The means of control of Tuberculosis in the Borough comprise:—

- (1) 100 bed Sanatorium at Walton just outside the Borough.
- (2) A fourteen bed pavilion for advanced cases at the Penmore Isolation Hospital.
- (3) A Tuberculosis Dispensary.

These institutions are the property of the County Council and administered by their Medical Officer.

The Tuberculosis Nurse is employed by the County Council, co-operation being obtained by periodical reports on overcrowding and sanitary defects.

57 houses were disinfected after removal or death of tuberculous patients:—

Ward.	Number of Disinfections	Cause for Disinfection.	
		Death.	Removal.
North	6	5	1
South	14	7	7
Central	9	4	5
West	28	17	11
	<hr/>	<hr/>	<hr/>
Totals	57	33	24
	<hr/>	<hr/>	<hr/>

The number of cases notified during the year is as follows:—

Localisation of Disease.	Age 0-1	Age 1-5	Age 5-15	Age 15-25	Age 25-45	Age 45-65	65 & over	Total
Pulmonary ...	1	6	13	12	19	13	...	64
Other Forms:—								
Bowels ...	...	2	...	...	...	...	...	2
Skin.								
Abscess ...	...	...	...	...	1	...	...	1
Meninges.								
Cerebral								
Meninges ...	...	1	1	...	...	...	...	2
Bones.								
Spine ...	...	...	...	1	2	...	...	3
Joints.								
Hip ...	...	1	1	...	...	...	...	2
Glands.								
Cervical ...	...	3	1	...	1	...	...	5
Inguinal ...	1	2	...	...	...	...	...	3
Totals ...	1	9	3	1	4	...	...	18



## PULMONARY TUBERCULOSIS.

Ward distribution of notified cases:—

	Cases Notified.	Deaths.
North Ward ...	16	7
South Ward ...	14	8
Central Ward	15	9
West Ward ...	19	13

It will be seen that the deaths were the highest in the West Ward.

Occupations followed by notified cases:—

Children:—

School	...	...	...	12
Others	...	...	...	6

Textile Workers:—

Net-Mender	...	...	...	1
Cotton Worker	...	...	...	1

Labourers ... .. 5

Indoor Occupations:—

Shop Assistant	...	...	...	5
Barmen	...	...	...	2
Clerks	...	...	...	3
Factory Workers	...	...	...	2

Coal Miners ... .. 6

Boot Repairers ... .. 1

Domestic Duties ... .. 11

Workers in Stone, Metal, etc.:—

Fitters	...	...	...	2
Stonemasons	...	...	...	2

Various Occupations:—

Painter	...	...	...	1
Potters	...	...	...	2
Engine Driver	...	...	...	1
Hawker	...	...	...	1

There was no striking incidence in any particular trade.

Percentage of notified patients having separate bedroom 41%.

### HOUSING.

Condition of Windows. Special attention is given by the Health Visitor to the windows. If fixed windows are found the Sanitary Inspector is immediately notified and the necessary action taken.

The number of cases receiving Institutional treatment is seen in the summary of Form C. (Register of Notification by Medical Officers of Poor Law Institutions and Sanatoria of Patients who have been previously notified before Admission).

Age.		Under 5	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and over.	Total.
Lungs	—	1	4	7	18	7	1	38
Knee Joint	—	—	1	—	—	—	—	1
Hip Joint	—	—	1	—	—	—	—	1
Spine	—	—	—	1	2	—	—	3
Skin	—	—	1	—	—	—	—	1
Totals —		1	7	8	20	7	1	44

The number of persons discharged from such Institutions is seen in the summary of Form D.

Age.		5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	Total.
Lungs	—	1	9	15	3	28
Spine	—	—	—	2	—	2
Totals —		1	9	17	3	30

## DEATH RATE.

The number of deaths registered as occurring in the Borough was 686, equal to a Crude Death Rate of 18.2 per 1,000 living, as compared with an average rate of 18.3 in the previous ten years, and 16.7 for 1914.

85 occurred in the Chesterfield and North Derbyshire Hospital, 123 in the Union Workhouse, and 9 in Penmore Hospital.

5 deaths of soldiers are not included in Table III., viz.:—

Enteric Fever, 1, belonging to Chesterfield, died at Penmore Hospital.

Pulmonary Tuberculosis, 1, belonging to Stamford, died at Penmore Hospital.

Violence, 2, one belonging to Brimington and the other to Alfreton. Both died in the Chesterfield and North Derbyshire Hospital.

Cerebro Spinal Fever, 1, belonging to Chesterfield, died at City Hospital, Newcastle-on-Tyne.

131 deaths occurred of persons not belonging to the Borough. Of these 57 died in the Hospital, 68 in the Workhouse, and 5 in Penmore Hospital, and one in the West Ward.

Their proper allocation is as follows:—

68 belonged to the Chesterfield R.D.

21 to Whittington and Newbold U.D.

9 to Clay Cross U.D.

12 to Bolsover U.D.

4 to Dronfield U.D.

3 to Clown R.D.

1 to Brampton and Walton U.D.

2 to Repton R.D.

1 to Matlock.

1 to Ilkeston Borough.

1 to Doncaster Borough.

1 to Staleybridge Borough.

4 to Blackwell R.D.

1 to Swanwick.

1 to Lynby.

1 to Huthwaite U.D.

Total foreign deaths 131.

The deduction of these, and the addition of those of 22 persons belonging to Chesterfield, who died outside the Borough, gives 577, of which 303 were those of males and 274 those of females, as the number, corrected for public institutions only, to be attributed to the Borough. It is equal to a DEATH RATE of 15.3 per 1000. This figure, multiplied by 1.0589, the factor for correction for age and sex, gives 16.18. The standardized rate in England and Wales was 14.8, that in 96 great towns 15.9, and in the 148 smaller towns 14.2.

The rate in the North Ward was 14.8 in the South 12.5, in the West 17.2, and in the Central 16.1. The causes of death are given in Table III.

There were 30 inquests held on deaths occurring in the Borough, the causes of death being certified by the Coroner as under: Residents 9, Strangers 21.

Cause of Death.	Borough.	Strangers.
Natural Causes:—		
Aortic Disease ... ..	1 ...	—
Gangrene ... ..	— ...	1
General Accidents:—		
Burns ... ..	1 ...	3
Scalds ... ..	1 ...	—
Tetanus after Injured		
Hand ... ..	— ...	2
Suffocation after Swallowing Hot Gravy	1 ...	—
Pneumonia after Swallowing Foreign Body	— ...	1
Accidental Fall ... ..	— ...	3
Inattention at Birth ...	— ...	1
Thrown out of Cart ...	— ...	1
Thrown out of Motor Car	1 ...	—
Knocked down by Motor Car ... ..	— ...	1
Knocked down by Locomotive ... ..	2 ...	1
Knocked down by Cattle Float ... ..	— ...	1

Cause of Death.	Borough.	Strangers.
Colliery Accidents:—		
Fall of Coal ... ..	1	2
General Injury ... ..	—	1
Crushed by Tubs ... ..	—	2
Engineering Works Accidents:—		
Knocked down by Steel Plate ... ..	1	—
Crushed by Crane ... ..	—	1
	—	—
Total ...	9	21
	—	—

Interments were carried out at the Cemetery, St. Thomas' Church, Christ Church, and Elder Yard Chapel the numbers being 377, 102, 63, and 4; total 546.

I should like to take this opportunity of thanking those gentlemen by whose courtesy the above figures were obtained.

**TABLE III.**  
**Causes of, and Ages at Death during the year 1915.**

CAUSES OF DEATH.		NETT DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District.
		All Ages	Under 1 year	1 and under 2 years	2 and under 5 years	5 and under 15 years	15 and under 25 years	25 and under 45 years	45 and under 65 years	65 and upwards	
All causes	Certified Uncertified	546 31	108 7	47 1	34 1	23 ..	26 ..	55 3	117 10	136 9	220 1
1.	Enteric Fever .. .. .	1	..	..	..	..	1	..	..	..	..
2.	Small-pox .. .. .	..	..	..	..	..	..	..	..	..	..
3.	Measles .. .. .	47	12	17	15	3	..	..	..	..	8
4.	Scarlet Fever .. .. .	1	..	..	..	..	1	..	..	..	1
5.	Whooping Cough .. .. .	6	3	3	..	..	..	..	..	..	..
6.	Diphtheria and Croup .. .. .	3	..	..	1	2	..	..	..	..	4
7.	Influenza .. .. .	1	..	..	..	..	1	..	..	..	..
8.	Erysipelas .. .. .	..	..	..	..	..	..	..	..	..	..
9.	Phthisis (Pulmonary Tuberculosis) .. .. .	37	..	1	1	4	5	18	8	..	15
10.	Tuberculous Meningitis .. .. .	6	1	1	1	2	1	..	..	..	1
11.	Other Tuberculous Diseases .. .. .	5	2	2	..	1	..	..	..	..	1
12.	Cancer, malignant disease .. .. .	40	..	..	..	..	2	9	16	13	12
13.	Rheumatic Fever .. .. .	1	..	..	..	..	1	..	..	..	1
14.	Meningitis .. .. .	5	2	..	2	..	..	1	..	..	2
15.	Organic Heart Disease .. .. .	41	..	..	..	..	2	4	14	21	15
16.	Bronchitis .. .. .	59	14	5	2	..	..	2	15	21	21
17.	Pneumonia (all forms) .. .. .	43	9	11	7	3	4	2	4	3	9
18.	Other diseases of respira- tory organs .. .. .	6	..	..	..	..	1	1	2	2	1
19.	Diarrhoea and Enteritis .. .. .	8	4	3	..	..	1	..	..	..	..
20.	Appendicitis and Typhlitis .. .. .	3	..	..	..	1	1	..	1	..	7
21.	Cirrhosis of Liver .. .. .	3	..	..	..	..	..	2	1	..	1
21A.	Alcoholism .. .. .	1	..	..	..	..	..	..	1	..	..
22.	Nephritis and Bright's Disease .. .. .	16	..	..	..	1	..	5	6	4	7
23.	Puerperal Fever .. .. .	1	..	..	..	..	1	..	..	..	..
24.	Other accidents and dis- eases of Pregnancy and Parturition .. .. .	3	..	..	..	..	1	2	..	..	..
25.	Congenital Debility and Malformation, includ- ing Premature Birth .. .. .	45	45	..	..	..	..	..	..	..	2
26.	Violent Deaths, excluding Suicide .. .. .	13	..	..	1	2	3	1	5	1	26
27.	Suicide .. .. .	..	..	..	..	..	..	..	..	..	..
28.	Other Defined Diseases .. .. .	149	16	3	4	3	..	9	43	71	83
29.	Diseases ill-defined or un- known .. .. .	33	7	2	1	1	..	3	10	9	2
Totals .. .. .		577	115	48	35	23	26	58	127	145	219



OTHER DEFINED DISEASES.—Table III. gives the number of deaths from various causes, and among them 149 as the number of deaths from "Other Defined Diseases." They are as follows:—

	Nett deaths at the subjoined ages of Residents whether occurring within or without the district.								
	All Ages	0—1	1—2	2—5	5—15	15—25	25—45	45—65	65 and over
<b>CIRCULATORY DISEASES:</b>									
Arterio Sclerosis ...	4	...	...	...	...	...	...	1	3
Aneurysm ...	1	...	...	...	...	...	...	1	...
Cerebral Hæmorrhage ...	29	...	...	...	...	...	...	10	19
Purpura ...	1	...	...	...	1	...	...	...	...
Cerebral Thrombosis ...	6	...	...	...	...	...	...	5	1
<b>GENERAL DISEASES:</b>									
Old Age ...	37	...	...	...	...	...	...	...	37
Rickets ...	2	1	...	1	...	...	...	...	...
Syphilis ...	1	1	...	...	...	...	...	...	...
Acute Eczema ...	1	...	1	...	...	...	...	...	...
Diabetes ...	5	...	...	...	...	...	...	5	...
Septicæmia ...	1	...	...	...	...	...	1	...	...
Chronic Rheumatism ...	1	...	...	...	...	...	...	...	1
Pernicious Anæmia...	1	...	...	...	...	...	...	1	...
Anæmia ...	1	...	...	...	...	...	1	...	...
Atelectasis ...	3	3	...	...	...	...	...	...	...
Exophthalmic Goitre ...	1	...	...	...	...	...	...	1	...
Inattention at Birth ...	1	1	...	...	...	...	...	...	...
German Measles ...	1	...	...	1	...	...	...	...	...
Dentition Convulsions ...	7	5	2	...	...	...	...	...	...
Addison's Disease ...	1	...	...	...	...	...	...	1	...
<b>DISEASES OF NERVOUS SYSTEM:</b>									
Pharyngeal Paralysis ...	1	...	...	...	...	...	...	1	...
Epilepsy ...	3	...	...	1	...	...	...	2	...
General Paralysis ...	6	...	...	...	...	...	1	5	...
Cerebral Tumour ...	3	...	...	...	...	...	1	2	...
Cerebral Abscess ...	2	...	...	1	...	...	1	...	...
Locomotor Ataxia ...	1	...	...	...	...	...	...	1	...
Dementia ...	1	...	...	...	...	...	...	...	1
<b>DISEASES OF DIGESTIVE SYSTEM:</b>									
Intestinal Obstruction ...	3	...	...	...	...	...	...	1	2
Gastritis ...	5	4	...	...	...	...	...	1	...
Gastric Ulcer ...	3	...	...	...	...	...	3	...	...
Stricture of Oesophagus ...	1	...	...	...	...	...	...	1	...
Cholecystitis ...	2	...	...	...	...	...	...	...	2
Acute Colitis ...	1	...	...	...	...	...	...	...	1
Constipation ...	1	...	...	...	...	...	...	...	1
Peritonitis ...	1	...	...	...	1	...	...	...	...
<b>LOCAL DISEASES:</b>									
Abscess ...	1	...	...	...	...	...	...	...	1
Gout ...	1	...	...	...	...	...	...	1	...
Cystitis ...	1	...	...	...	...	...	...	1	...
Vulvitis ...	1	1	...	...	...	...	...	...	...
Otitis Media...	1	...	...	...	...	...	1	...	...
Tonsillitis ...	1	...	...	...	1	...	...	...	...
Cellulitis ...	1	...	...	...	...	...	...	1	...
Enlarged Prostate ...	2	...	...	...	...	...	...	...	2
Osteoma ...	1	...	...	...	...	...	...	1	...
<b>TOTALS</b> ...	<b>149</b>	<b>16</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>...</b>	<b>9</b>	<b>43</b>	<b>71</b>

DISEASES ILL-DEFINED OR UNKNOWN.—In Table III. is given the number of deaths from all causes, and among them are 33 who died from diseases "ill-defined or unknown." This category is inclusive of 31 uncertified deaths. They are as follows:—

	YEARS.								TOTAL.
	0—1	1—2	2—5	5—15	15—25	25—45	45—65	65 and over.	
Strangulated Hernia ...	...	...	...	...	...	...	1	...	1
Marasmus ...	1	1	...	1	...	...	...	...	3
Morbus Cordis ...	...	...	...	...	...	1	...	...	1
Premature Birth ...	2	...	...	...	...	...	...	...	2
Apoplexy ...	...	...	...	...	...	1	...	...	1
Heart Failure ...	1	...	...	...	...	...	6	4	11
Old Age ...	...	...	...	...	...	...	...	3	3
Bronchitis ...	1	1	...	...	...	...	1	2	5
Cirrhosis ...	...	...	...	...	...	1	...	...	1
Aneurism ...	...	...	...	...	...	...	1	...	1
Drowning ...	...	...	...	...	...	...	1	...	1
Convulsions ...	1	...	1	...	...	...	...	...	2
Inattention at Birth	1	...	...	...	...	...	...	...	1
Total ...	7	2	1	1	...	3	10	9	33
Certified ...	...	1	...	1	...	...	...	...	2
Uncertified ...	7	1	1	...	...	3	10	9	31

## MEANS FOR PREVENTING MORTALITY IN CHILD BIRTH AND INFANCY.

### (1). NOTIFICATION OF BIRTHS ACT, 1907.

	1914.	1915.
Notifications received ... ..	1216	1048
By Medical Practitioners ... ..	112	88
„ Midwives ... ..	1067	940
„ Parents ... ..	37	20
Number of Illegitimate Births ... ..	47	47
„ „ Still Births ... ..	44	44
„ „ First Visits ... ..	1123	1161*
„ „ Re-visits ... ..	834	3280
Sanitary Defects reported to Inspector of Nuisances ... ..	18	84
Notified Births not visited by request of Medical Attendant or Parent ... ..	93	43

(\*Many of the births notified in 1914 were only visited in 1915, hence the number of 1161 first visits).

By comparison of the above two columns the following facts will be observed:—

- (1) The number of notified births was 168 less in 1915 than in 1914.
- (2) The percentage of Illegitimate births and Still births notified was greater in 1915:—

	1914.	1915.
Illegitimate births	3.8%	4.4%
Still births ...	3.6%	4.1%

- (3) The greatly increased number of home visits by the Health Visitors in 1915—4441—as compared with a total number of 1957 for 1914.

In previous years with only one Health Visitor available the visitation of notified births could not be done efficiently and many births were only visited once. A single visit is not of much avail because advice given once has little value and must be frequently reiterated to

be effective. After August, 1915, when a second Health Visitor was appointed, it was possible to carry out the work more thoroughly, and to concentrate on cases needing careful supervision.

Each visitor is responsible for the supervision of the births in two of the four wards of the town, so that there is no overlapping. The first visit is usually paid within two or three days of the notification of birth, and, if a midwife be in attendance, she is consulted with regard to the condition of the mother and child.

The second visit, usually paid when the infant is a month old (earlier in special cases), is the most important and necessary one, for it is about this period that so many mothers discontinue breast-feeding because, to use their own words, "Their milk left them after they got up."

Every effort is made to promote the continuance of breast-feeding. The nursing mother is advised as to the most suitable diet, and, in certain cases, galactagogues (medicines to promote the secretion of milk) are supplied.

As the object of the visits is the prevention of mortality in infancy, which is largely due to ignorance, particular attention is given to bottle-fed babies, who are visited as frequently as possible. In the case of badly-nourished or neglected infants the nurse may make weekly visits. During the year as many as 30 visits have been paid to one household. Cards giving full information as to the feeding of children are left at the house and have been greatly appreciated by the mothers. The Health Visitor also leaves a pamphlet showing the hours when the different Infant Consultation Centres are open, and invites the mothers to attend these Centres.

Notified Still births are all carefully inquired into and a special record kept.

Any insanitary condition found at the house is reported by the Health Visitor and subsequently investigated by the Inspector of Nuisances.

It is gratifying to note that the visits of the nurse, at one time considered a nuisance, are being more and more welcomed by the mothers when in difficulties. The fact that occasionally a request for a visit is sent to the Health Office is proof of their appreciation of the Health Visitor's advice and services.

## INFANT WELFARE SCHEME.

The Borough is now equipped with four Infant Consultation Centres, one for each ward. In addition, the new Treatment Centre, in Lordsmill Street, was opened in September, 1915.

A Sub-Committee of the Health Committee, with co-opted lady members, was appointed in 1914 to supervise this work.

The Local Government Board now contributes in grant half of the cost of administration of this Infant Welfare Scheme, including the salaries of the two Health Visitors.

## INFANT CONSULTATION CENTRES.

CENTRAL WARD CLINIC, held at the Settlement on Monday afternoon, and managed by Miss Richards, was established some years ago, and credit must be given to this institution for the initiation of this Infant Consultation work in the Borough.

During 1915 150 mothers attended, making 410 attendances.

The total number on the register is 206.

WEST WARD CLINIC, held at Mount Zion Chapel on Wednesday afternoon; managed by Miss Smith.

Number on Register	226
Average Attendance	32
Total Attendances	649

The premises in which this clinic is held are excellent and commodious and most suited for the purpose.

NORTH WARD CLINIC, now held at the New Centre, Lordsmill Street, on Monday afternoons, managed by Mrs. Tucker.

Number on Register	66
Total Attendances	374

SOUTH WARD CLINIC, also held at Lordsmill Street Centre on Tuesday afternoon, managed by Mrs. Crosse.

Number on Register	89
Total Attendances	446

It will be seen from these figures that the "clinics" are now firmly established, and full advantage has been taken of them by the mothers.

The activities of the Clinics include "savings clubs," exhibition of model thrift-garments, exhibition of "hygienic methods of feeding," "hygienic storage of milk," sale of dried milk at cost price, etc. Where space allows, as in the Central and West Ward Clinics, where a play-room can be provided, mothers are encouraged to bring their children over one year but under school age.

Expectant mothers are also encouraged to attend, but few have taken advantage of the centres. As the "Welfare of the mother and child cannot safely be considered separately," it is hoped that the midwives practising in the Borough will co-operate and try to induce expectant mothers needing advice to attend the Clinics.

The Health Visitors attend the Clinics for the purpose of weighing and advising on the rearing of infants. The advice given by them is only "hygienic in scope," and any child whose condition is not normal is referred to a private medical man or to the Medical Officer at the new Treatment Centre, Lordsmill Street. Careful records are kept as to the progress of the child.

At one time weekly "Health" Lectures were given to the mothers, but these have been discontinued as it has been found, to be really useful, any instructions given must be individual.

These Infant Consultations Centres are doing excellent work, and ought, ultimately, not only to effect a great reduction in the Infant Death Rate, but also a healthier and more robust child will be the outcome of all this educative work.

The Banana-Crate Cradle scheme has continued to be a success. Members of the Women's Adult School make these cheap hygienic cradles and are able to sell them at about 4s. to 5s. During the year 38 of these have been sold to mothers.

#### NEW INFANT WELFARE CENTRE.

A special report by the Medical Officer of Health on the serious Infant Mortality prevailing was submitted to the Health Committee and a scheme suggested for



the treatment of Summer Diarrhœa. With this object, after the approval of the scheme by the Local Government Board, the premises in Lordsmill Street were taken over by the Corporation, and now a permanent Municipal Infant Welfare Centre is established under the control of the Medical Officer of Health, assisted by the two Health Visitors.

The building, a two-storeyed one, originally intended for a shop, was readily adapted. The ground floor has been partitioned off into a Consulting Room, Kitchen, and Waiting Room. The kitchen is provided with a gas "cooker," so that practical demonstrations can be given here to mothers on the preparation of foods.

The upper floor, one large well-lighted room with cross ventilation, has been fitted up as a treatment room. Hot water has been installed, and it has every sanitary convenience. This room, heated by two gas fires, contains three cots, thus giving facilities for the detention of serious cases needing special treatment for the day. No child was detained over night, the mother fetching the child home in the evening in every case.

When the centre was nearing completion the following pamphlet was posted to many of the homes at which births had occurred during the year:—

#### BOROUGH OF CHESTERFIELD.

#### PUBLIC HEALTH DEPARTMENT.

#### SUMMER DIARRHŒA.

An Infant Welfare Centre will be opened at 32, Lordsmill Street, on Thursday, September 2nd, 1915, where babies suffering from the above dangerous condition will receive special treatment.

As many infant lives are lost every year from Diarrhœa mothers are requested to bring their babies for advice and treatment to this centre at the FIRST SIGN of Diarrhœa or Vomitting.

The Doctor will be in attendance between the hours of 10 and 11 a.m.

As a result of this intimation nearly 30 mothers brought their infants suffering from Diarrhœa for treatment on the opening day.

The treatment prescribed has been largely dietetic and hygienic. Pamphlets giving simple rules for the Prevention and Treatment of Epidemic Diarrhœa were issued to the mothers. A few simple drugs were supplied, if necessary, and serious diarrhœal cases with symptoms of prostration and toxæmia were detained for rectal irrigations, subcutaneous injections of sea-water, etc. 67 cases of Diarrhœa were treated, none of which were fatal. As the summer of 1915 was cold and wet, cases of serious epidemic diarrhœa were few, the majority of the cases being mild and quickly yielding to treatment. In the more serious cases the good results obtained by frequent irrigation have been very striking.

During September and part of October the centre was open every morning for diarrhœal cases. After the Epidemic Diarrhœa season the North and South Ward "Baby Clinics," which had been previously held in unsuitable premises, were transferred to this central clinic, and a special Thursday morning session was instituted at which the Medical Officer attends. Children attending the afternoon clinics, suffering from malnutrition and other conditions, who are not under the care of a private doctor, are now sent by the Health Visitors for Medical Advice and Treatment to this special Thursday meeting.

From September 3rd to December 31st, 1915, 149 children attended the Centre, of which 98 were infants under one year and 51 were children over one year but under school age.

Cases under one year:—

Diarrhœa ... ..	39
Malnutrition (from continued digestive disorders due to improper feeding). ... ..	30
Marasmus (condition of severe wasting) ... ..	5
Rickets ... ..	3
Bronchitis ... ..	2
Ophthalmia Neonatorum ... ..	3
Prematurity ... ..	1
Other Illnesses and Defects ... ..	15
	<hr/>
	98

Three of these children died from marasmic conditions.

Of the 77 infants under one year suffering from disorders of nutrition and dyspepsias (Diarrhœa 39, Malnutrition 30, Marasmus, 5, Rickets 3) conditions influenced by the mode of feeding

45 were bottle-fed	...	...	58.4%
18 were mixed-fed	...	...	23.4%
14 were wholly breast-fed	...	...	18.2%

Thus 80% of the children who attended the Centre suffering from disorders of nutrition were wholly or partly bottle-fed, showing the much greater incidence of digestive disorders amongst bottle-fed babies, and very striking evidence of the great dangers of hand-feeding as compared with natural feeding.

Cases over one year and under school age attending the Clinic during 1915:—

Diarrhœa	...	28
Rickets	...	17
Tuberculosis	...	1
Pneumonia	...	1
Other Diseases	...	4
		<hr/> 51 <hr/>

It might be of interest to describe a few of the cases dealt with at the Infant Welfare Centre, to show the type of case treated and the excellent results that may be obtained by the simple rules of treatment advocated.

Case 1. A female child, aged seven months, was brought to the Infant Welfare Centre on November 25th, 1915. The mother complained that the child was "wasting" and had quite decided it would die. The nutrition was very poor, the weight being only 6½lbs. (less than the average weight of a newly-born infant). The history elicited was that the child had been born a healthy full-time infant, had been breast-fed for ten days after birth, then bottle-fed. Many varieties of food had been tried, including bread and milk, but all had the same result—symptoms of digestive disorder, vomiting, colic, and failure to thrive—in fact a history of six months dyspepsia. It was found that a tube bottle was being used.

The Health Visitor took charge and supervised the hygiene of the feeding, visiting the home frequently. The child was ordered to be fed on 3oz. diluted citrated milk, three hourly. Good result was soon evident. On December 2nd, a week later, the weight was 7lbs. 3ozs.; on December 16th the weight was 8lbs. 3½ozs., and now the child weighs over 15lbs., and is healthy, well-nourished, and progressing satisfactorily.

Case 2. A boy aged 1 year and 9 months was sent to the Centre from the Tuberculosis Dispensary. The case had been notified as one of abdominal tuberculosis, but no definite signs of tuberculous infection were present. The history showed that a twin sister had died of abdominal tuberculosis, aged 1½ years. The child had been steadily losing flesh and now was unable to walk. On inquiry into the dietary of the child it was found that he lived on the same food as the mother, "anything going," but never received any milk. Only condensed milk was used in the home.

The only treatment ordered was two pints of milk daily, which was supplied by the War Relief Committee. Signs of improvement were soon apparent, the child gained 2lbs. in the first few weeks under observation, and is now running about, a healthy robust child.

These two cases are illustrative of many others treated at the Centre, and show the need there was for the provision of an Infant Welfare Centre, and I am confident that any expenditure incurred has been justified by the very encouraging results already obtained.

## (2) INSPECTION OF OUT-WORKERS OR HOME-WORKERS.

Lists of out-workers are sent periodically by employers and the homes are visited twice yearly by the Health Visitor.

Of the Out-workers 42 are engaged in net mending.

„ 18 „ wearing apparel.

The conditions were found to be satisfactory.

## (3) INSPECTIONS OF MIDWIVES.

This work is carried out by the County Council, and is reported upon by their Medical Officer.

## BIRTH RATE.

The total number of births registered as occurring in the Borough was 1,031. Included among these are 11 belonging to other districts. There was also 1 birth allocated to the Borough by the Registrar-General which occurred outside the Borough. Twenty-one births occurred in the Workhouse, 10 of which belonged to other districts. The births are distributed as follows, the Workhouse births belonging to the Borough being allocated to their proper wards:—

	Male.	Female.	Illegitimate.	Legitimate.	Totals.	Rate per 1,000 Living.
Central ...	133	113	16	236	246	25.1
North ...	111	108	13	206	219	24.1
South ...	133	122	8	247	255	29.8
West ...	169	132	14	287	301	29.4
	546	475	51	970	1021	27.1

The corrected number of births was 1021, which is equal to a Birth Rate of 27.1 per 1,000 living, as compared with a decennial average number of 971 and a rate of 28.7. The chart at the end of this report shows the steady drop in the rates of England and Wales and the County of Derbyshire.

	Population.	Net Births.	Net Deaths.	Natural Increase.	
				Number	Rate per 1,000
1905 ... ..	28890	872	384	488	16.8
1906 ... ..	29255	830	454	376	12.8
1907 ... ..	29583	853	474	379	12.8
1908 ... ..	30690	909	531	378	12.3
1909 ... ..	31243	888	457	431	13.79
1910 ... ..	31845	871	420	451	14.1
1911 ... ..	37550	1101	642	459	12.2
1912 ... ..	38100	1100	500	600	15.7
1913 ... ..	39594	1089	634	455	11.5
1914 ... ..	40465	1199	547	652	16.1 <sup>1</sup>
Average ... ..	33721	971.2	504.3	466.9	13.8
1915 ... ..	37653	1021	577	444	11.7

**ILLEGITIMACY.**—Illegitimacy has an important bearing on the question of infant mortality. The total number of illegitimate births was 61. After correction for those in the Union Workhouse and not belonging



to the Borough, the number was reduced to 51, equal to a rate of 49.9 per 1,000 births. The rates for 1914, 1913, 1912, 1911, 1910, 1909, and 1908 being 38.3, 57, 43.6, 50.8, 40.1, 42.8, and 44 respectively, that of 1914 being the lowest recorded for the Borough. The rate for the five years ending 1904 was 52.9, and for the five years ending 1909, 53.1. The rates of England and Wales for the same periods were 39.4 and 40.1 respectively.

The rate was 59.3 in the North Ward, 31.3 in the South, 46.5 in the West, and 65 in the Central.

#### INFANTILE MORTALITY.

There were 115 deaths and an infantile mortality rate of 112 per 1,000 born, as against 124 deaths and a rate of 103 for 1914 and a decennial average of 139 deaths and a rate of 145.

Five deaths took place in the Workhouse, of which all were "strangers," and seven in the Chesterfield and North Derbyshire Hospital, of which four were "strangers."

Allocating these three to their proper wards, the rate of infantile mortality in the respective wards is as follows:

WARD.	Nett Births.	Nett Deaths.	Infantile Mortality per 1000 Births.
Central... ..	246	33	134
North ... ..	219	27	123
South ... ..	255	18	70
West ... ..	301	37	122
Borough ... ..	1021	115	112



TABLE IV.

**INFANT MORTALITY.**

Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSES OF DEATH.		Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total Deaths under 1 year.
All causes	Certified ..	18	12	5	2	37	10	27	23	11	108
	Uncertified ..	3	..	1	..	4	..	3	..	..	7
Small-pox .. ..		..	..	..	..	..	..	..	..	..	..
Chicken-pox .. ..		..	..	..	..	..	..	..	..	..	..
Measles .. ..		..	..	..	..	..	..	3	5	4	12
Scarlet fever .. ..		..	..	..	..	..	..	..	..	..	..
Whooping-Cough ..		..	..	..	..	..	..	1	..	2	3
Diphtheria and Croup ..		..	..	..	..	..	..	..	..	..	..
Erysipelas .. ..		..	..	..	..	..	..	..	..	..	..
Tuberculous Meningitis ..		..	..	..	..	..	..	1	..	..	1
Abdominal Tuberculosis(b) ..		..	..	..	..	..	..	..	2	..	2
Other Tuberculous Diseases ..		..	..	..	..	..	..	..	..	..	..
Meningitis (not Tuberculous) ..		..	..	..	..	..	..	..	1	1	2
Convulsions .. ..		..	..	1	..	1	..	1	2	1	5
Laryngitis .. ..		..	..	..	..	..	..	..	..	..	..
Bronchitis .. ..		..	..	..	..	..	2	6	5	1	14
Pneumonia (all forms) ..		..	..	..	..	..	..	4	4	1	9
Diarrhœa .. ..		..	..	..	..	..	1	3	..	..	4
Enteritis .. ..		..	..	..	..	..	..	..	..	..	..
Gastritis .. ..		..	..	..	1	1	1	1	..	..	3
Syphilis .. ..		..	..	..	..	..	1	..	..	..	1
Rickets .. ..		..	..	..	..	..	..	..	1	..	1
Suffocation, overlying ..		..	..	..	..	..	..	..	..	..	..
Injury at birth .. ..		..	..	..	..	..	..	..	..	..	..
Atelectasis .. ..		..	2	..	..	2	1	..	..	..	3
Congenital Malformations ..		..	2	1	..	3	..	..	1	..	4
Premature birth .. ..		15	5	..	..	20	..	1	..	..	21
Atrophy, Debility and Marasmus .. ..		..	3	2	2	7	4	6	2	1	20
Other Causes .. ..		4	2	1	..	7	..	3	..	..	10
Totals .. ..		21	12	6	2	41	10	30	23	11	115

Nett Births in the year ..	Legitimate .. ..	..	..	..	..	970
	Illegitimate .. ..	..	..	..	..	51
Nett Deaths in the year of..	Legitimate infants .. ..	..	..	..	..	101
	Illegitimate infants .. ..	..	..	..	..	14

The following figures are abstracted from Table IV.:—

Year.	Premature Births and Congenital Defects.	Diarrhoeal Diseases.	Atrophy and Marasmus.	Convulsions.
1906	35	36	24	13
1907	37	22	32	19
1908	32	33	12	7
1909	40	24	23	4
1910	29	28	27	9
1911	29	68	33	15
1912	32	11	21	10
1913	28	33	29	9
1914	32	15	26	7
1915	28	4	20	5
Average of 10 years	32.2	27.4	24.7	9.8

In considering Table IV. it will be seen that out of a total of 115 deaths under one year of age 41 (or 35.6%) occurred within a month of birth. These deaths from prematurity and congenital defects are largely due to conditions determined by the mother's health before the birth of the child, and are not affected by the present work of the Health Visitors.

To deal with this mortality from pre-natal causes the provision of a Maternity Centre is strongly advocated. This centre should be equipped with a few beds for dealing with complicated cases of labour and cases from insanitary overcrowded homes. Attached to the Centre would be an Ante-natal Clinic to which expectant mothers would come for advice. "The object of an Ante-natal Centre is to ensure the removal of factors adverse to the health of the expectant mother and infant, and to ensure that the confinement takes place under conditions favourable to the life and health of both mother and child".

Notwithstanding the fact that the climatic conditions during 1915 did not favour a high infant death rate and despite the organised Infant Welfare Work the Infant Mortality figure showed an increase—112 per 1,000 births as compared with 103 for 1914.

This increase must be explained by the very abnormal conditions prevailing. Possibly the condition of strain under which so many mothers have lived, the decrease in the discipline of the home, irregular meals and unsuitable food are all factors in this increase. Without a doubt these conditions have tended to the production of more ill-health amongst women, and thus towards an increase in the practice of bottle-feeding.

Although it is estimated that about 99% of women can nourish their infants naturally the proportion of infants wholly breast-fed is lamentably lower.

In the table below an attempt has been made to initiate an investigation into the relationship between the mode of feeding and mortality amongst infants. The figures given are not absolutely accurate, as with only one Health Visitor, careful records could not always be kept, and in some cases notified births were only visited once.

MORTALITY PER 1,000 BIRTHS FROM CERTAIN  
DISEASES AMONG CHILDREN BORN DURING 1914  
WHO WERE BREAST-FED UP TO THE AGE OF 3  
MONTHS, OR WERE AT FIRST BREAST-FED AND  
LATER HAND-FED (MIXED), OR WHO WERE  
WHOLLY BOTTLE-FED.

Method of Feeding	Breast-fed.		Mixed-fed.		Bottle-fed.		All three Classes.	
No. of Children ...	886		102		93		1081	
Disease.	No. of Deaths.	Death Rate per 1000.	No. of Deaths.	Death Rate per 1000.	No. of Deaths.	Death Rate per 1000.	No. of Deaths.	Death Rate per 1000.
Bronchitis and Pneumonia ...	15	16.9	3	29.4	8	86.02	26	24.05
Diarrhœa (including enteritis and gastritis) ...	2	2.2	5	49.01	6	64.5	13	12.02
Marasmus ...	5	5.6	5	49.01	3	32.2	13	12.02
Atrophy and Debility	2	2.2	2	19.6	1	10.7	5	4.6
Tuberculosis ...	2	2.2	1	9.8	...	...	3	2.7
Convulsions...	5	5.6	...	...	1	10.7	6	5.5
Zymotic Diseases (excluding Diarrhœa) ...	17	19.1	3	29.4	1	10.7	21	19.4
Other Causes ...	9	10.1	3	29.4	...	...	12	11.1
Totals ...	57	64.3	22	215.6	20	215.05	99	91.5

In the period between January 1st, 1914, and December 31st, 1914, 1216 children were notified to the Medical Officer of Health. Of those 1081 were under the supervision of the Health Visitor, while 97 were not visited.

38 deaths from Prematurity and Congenital Defects are not included in the above tables as the cause of these deaths is ante-natal in origin and they have no relation to feeding. It will be seen that of the 1216 babies born in 1914, 137 of them (including the 38 due to prematurity) failed to reach the age of one year.

Of the 1081 births under observation of the Health Visitor

886 were breast-fed	...	81.9%
102 were mixed-fed	...	9.8%
93 were bottle-fed	...	8.6%

Death rate per 1,000 births of children breast-fed 64.3  
 Death rate per 1,000 births of children mixed-fed 215.6  
 Death rate per 1,000 births of children bottle-fed 215.05

These figures are striking and show clearly the much greater mortality prevailing amongst infants wholly or partly bottle-fed as compared with those who receive the mother's milk only.

Attention was drawn by my predecessor in the Health Report for 1914 to the practice of criminal abortion and the use of abortifacients (diachylon) in Chesterfield. With the rapidly declining birth rate this is a question which needs serious consideration. At the end of the year enquiries were sent to midwives practising in the Borough, asking the following two questions:—

1. The number of abortions, miscarriages, and stillbirths which occurred in your practice during 1915?
2. Have you any knowledge as to the taking of drugs or the use of other means with the object of producing abortion by women in Chesterfield?

15 midwives were written to, 13 of whom replied. The replies showed that (1) 58 cases of abortion or stillbirth had occurred during the year in the practices of the thirteen midwives, (2) Three midwives had very grave suspicions as to the prevalence of drug-taking to produce abortion, whilst the other ten had no knowledge with regard to this practice.

Notification of Still births after the 28th week of pregnancy is required under the Notification of Births Act, and, if it were possible for this compulsory notification to be extended to all cases of still birth and miscarriage without this limiting period, so that full investigation could be made of each case, some information with regard to this nefarious practice might be elicited.

# Vital Statistics of separate Localities in 1915 and previous years in the Borough of Chesterfield.

NAMES OF LOCALITIES.	THE BOROUGH.				NORTH WARD.				SOUTH WARD.				WEST WARD.				CENTRAL WARD.				HOSPITAL.	UNION WORK-HOUSE.
	Population estimated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population estimated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population estimated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population estimated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population estimated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population estimated to middle of each year.	Nett Deaths at all Ages.
1905	28890	872	384	104	10440	246	109	28	9000	280	127	39	9450	346	148	37	9450	346	148	37	..	..
1906	29255	830	454	151	10646	233	126	35	9077	276	153	54	9532	321	175	62	9532	321	175	62	..	..
1907	29583	853	474	159	10425	262	158	53	8706	279	163	54	9901	312	153	52	9901	312	153	52	95	456
1908	30690	909	531	137	10860	257	172	35	9010	326	177	51	10250	326	182	51	10250	326	182	51	107	463
1909	31243	888	457	124	11003	240	145	30	9110	282	149	42	10560	366	163	52	10560	366	163	52	107	463
1910	31845	871	420	138	11048	261	137	41	9165	269	137	36	10970	341	146	61	10970	341	146	61	148	514
1911	37550	1101	642	194	9035	206	163	55	8527	257	118	30	10213	358	188	61	10213	358	188	61	132	523
1912	38100	1100	500	106	9173	217	121	14	8653	262	83	25	10360	343	161	44	10360	343	161	44	149	493
1913	39594	1089	634	156	9318	235	148	37	9213	262	119	36	11118	330	156	37	11118	330	156	37	133	456
1914	40465	1199	547	124	9436	229	110	25	9575	318	105	29	11438	376	172	46	11438	376	172	46	162	488
Average of Years 1905 to 1914.	33721	971	504	139	10138	238	138	35	9003	281	133	39	10379	341	164	50	10379	341	164	50	..	..
1915	37653	1031	577	115	9064	219	135	27	8550	255	107	18	10236	301	177	37	10236	301	177	37	172	438



# H.—VITAL STATISTICS OF THE DISTRICT.

TABLE I. Vital Statistics of the Whole District during 1915 and previous years.

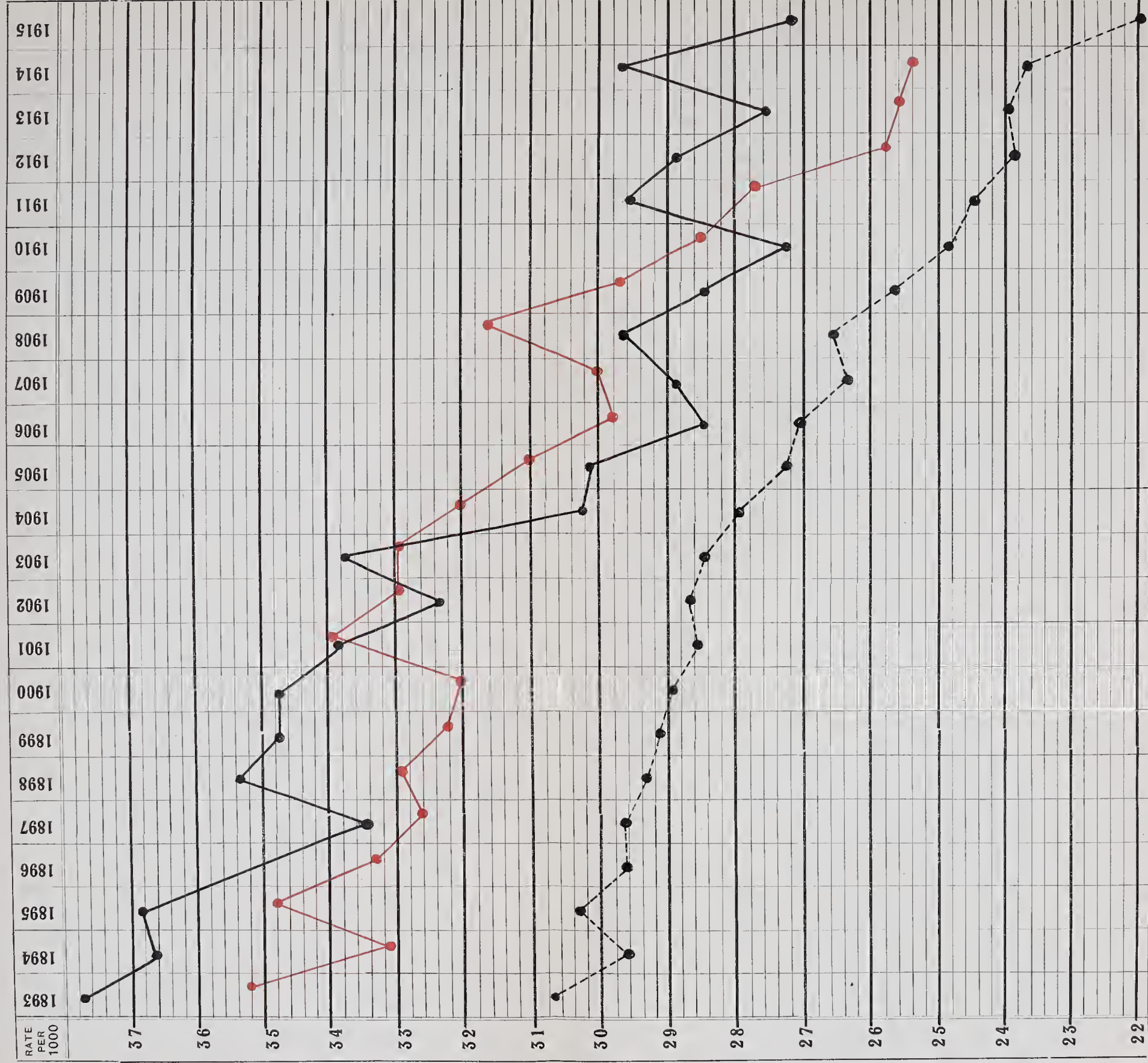
YEAR	Populati'n estimated to middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.			TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.				
		Un- corrected Number.	Nett.		Num'b'r	Rate.	Rate.	of non- Residents registered in the District.	of Resi- dents not registered in the District.	Under 1 Year of Age		At all Ages.		
			Number.	Rate.						Num'b'r	Rate.	Rateper 1000 Nett Births.	Num'b'r	Rate.
1	2	3	4	5	6	7	8	9	10	11	1	13		
1910	31,845	889	871	27.4	515	16.2	105	10	138	158	420	13.2		
1911	37,750	1119	1101	29.3	768	20.4	146	20	194	176	642	17.1		
1912	38,100	1119	1100	28.8	612	16.6	133	21	106	96	500	13.1		
1913	39,594	1104	1089	27.5	752	18.9	139	21	156	143	634	16.0		
1914	40,465	1204	1199	29.6	679	16.7	158	27	124	103	548	13.5		
1915	37,653	1031	1021	27.1	686	18.2	131	22	115	112	577	15.3		

At the Census of 1911 the total population at all ages was 37,406, and the total families or separate occupiers, 7,711.  
The area of the District in acres (land and water included) was 2,643.



Continuous line - Birth Rate Chesterfield.  
 Dotted line - Birth Rate England and Wales.  
 Red line - Birth Rate County of Derbyshire.

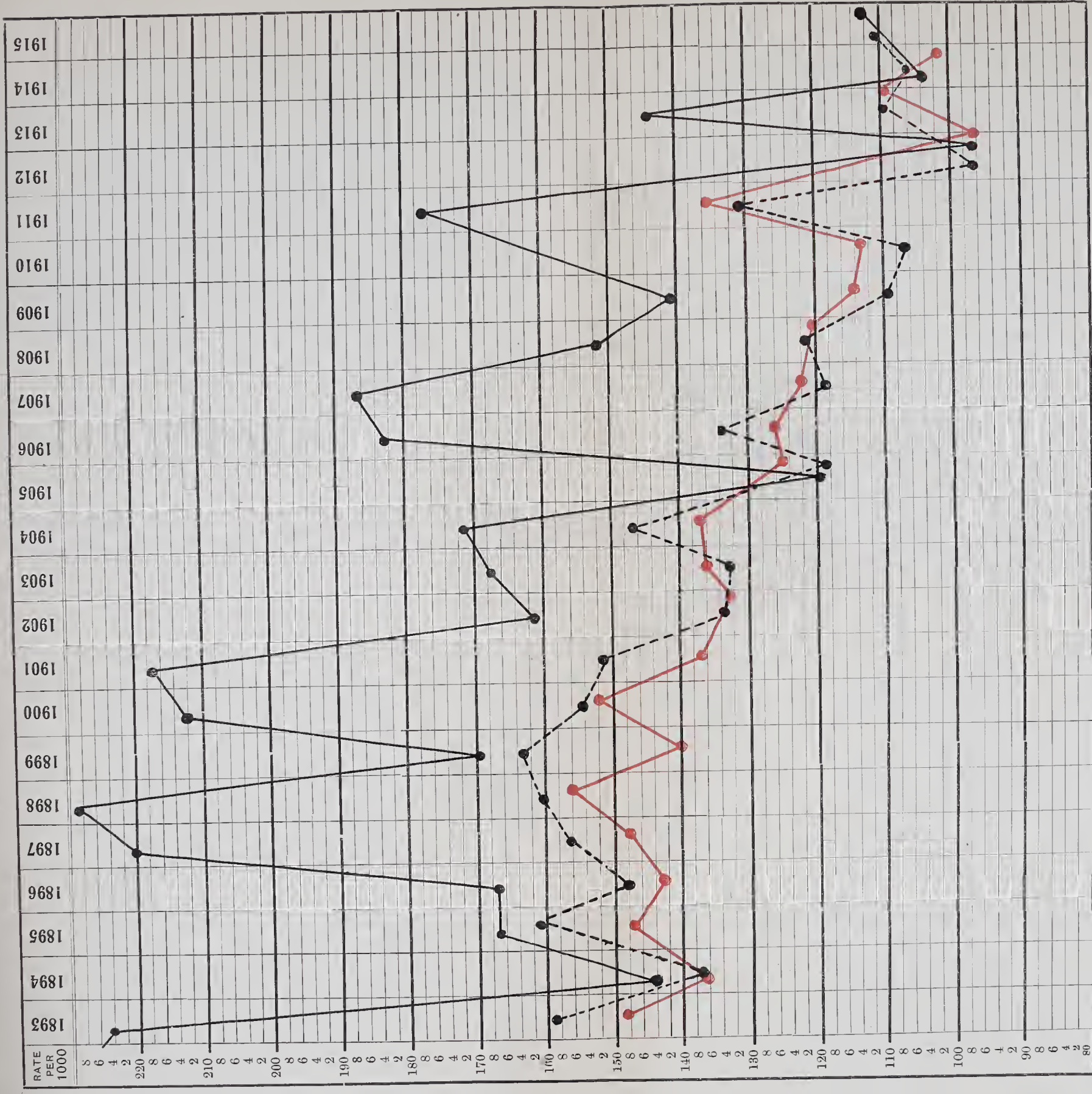
CHART SHEWING BIRTH RATES FOR YEARS 1893 -1915.







# CHART SHEWING INFANTILE MORTALITY ... 1893-1915.



Continuous line - Borough of Chesterfield.  
Dotted line - England and Wales.  
Red line - Derbyshire.





CHART SHEWING THE DEATH RATES ... 1893 -1915.

